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Monthly Super Output Shows Rise

Shipments Decrease 5% From October, 1958

WASHINGTON—Production of superphosphate and other phosphatic fertilizers in the U.S. during October, 1959, amounted to 218,506 short tons, or 8,133 short tons more than October of 1958, reported the Bureau of the Census, U.S. Department of Commerce.

Shipments of superphosphate and other phosphatic fertilizers during October totaled 148,509 short tons, or a decrease of 5% from the volume shipped during the corresponding month in 1958.

Stocks held by producing plants as of Oct. 31, 1959, totaled 290,161 short tons, or 3% more than those held on Sept. 30, 1959.

For the period January through October, 1959, production was 2,180,091 short tons or 9% more than production of the similar period in 1958.

Shipments during this 10 month period were 8% more than the 1958 period.

Korea Invites Bids

WASHINGTON — The government of Korea has issued invitations for bids on 78,276 metric tons of fertilizers it intends to purchase with mutual aid funds supplied by the International Cooperation Administration.

Korea wants 60,000 metric tons of nitrogenous fertilizers, 3,276 tons of potash fertilizer and 15,000 tons of phosphate fertilizer.

Another large purchase of fertilizers is to be made later by Korea with other funds being advanced by ICA. The purchase authorizations are for $8.2 million of nitrogenous fertilizers, $320,000 of potash fertilizers and $2.8 million of phosphate fertilizers.

Bids on the 78,276 tons are to be submitted by 10:00 a.m. on Jan. 9, under invitation number 653-C, available from the Korean Embassy in Washington or from the offices of the Korean consulate general in New York and San Francisco.

Stepped-Up FDA Activity in 1960 Clouds Otherwise Serene Outlook

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON—Ominous acceleration of activity by the Food and Drug Administration in the agricultural chemical field, clouds the otherwise fairly promising 1960 economic horizon for the trade. No major change in farm legislation is in prospect during the closing session of the 86th Congress, and the general picture looks reasonably good in areas other than those where the FDA is a force.

As a matter of fact, it now appears that the functions of the FDA commissioner have been taken over lock, stock and barrel by Arthur S. Flemming, secretary of the U.S. Department of Health, Education and Welfare, who is leading an apparent all-out drive to cast suspicion on all agricultural chemicals used in the production of agricultural commodities. The program is calculated to go clear across the board to include materials even after they have been certified as economically useful by USDA as required under the Miller amendment.

Mr. Flemming's attack on the cranberry industry, suspected by some as being an opening gun to attract political attention, struck out bravely against this relatively small group of 2,500 growers whose total output is worth up to $15 million. Its net result was public hysteria, fear and confusion at the very time of year when cranberries ordinarily enjoy their optimum sale during the holiday season.

Federal government observers here said at the time, that Mr. Flemming might and could have moved more discreetly by merely taking off the market any suspected production which violated FDA requirements. In the case of cranberries, FDA had not authorized any residual tolerances of the weedkiller which allegedly contaminated some part of the 1959 cranberry crop.

An index of the direction which this Flemming drive is taking may be found in a comment of a responsible FDA official who told this reporter that cranberry growers in some areas

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Interdepartmental Fight Prospect if FDA Seeks to Do USDA's Inspection Services

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON—A corollary to the accelerating drive of Mr. Flemming to discredit pesticides and other chemical products used in the production of food for human consumption is an apparent attempt to remove from the U.S. Department of Agriculture the latter's inspectorial services over meat, poultry and processed fruits and vegetables.

This statement has the backing of an old-timer of USDA who has been through the mill in inter-governmental politics and who now sees that the current attacks on use of agricultural chemicals are little less than an attempt on the part of Mr. Flemming to take away from USDA its inspection services as well as its certification authority available under the present FDA law. This law authorizes FDA to prescribe residual tolerance levels for agricultural pesticides.

Recently FDA gave a glowing report on its efficiency in protecting the public food supply but this report noted that FDA was crippled in its efficiency since it did not have the manpower to carry out its authorized activities.

It may be now seen that FDA is using this report as a fulcrum for a lever of publicity on alleged misuse of chemical compounds in crop production. This is calculated to compel Congress to expand the FDA budget and at the same time widen its control over the presently authorized USDA inspectorial services over processed fruits and vegetables, meats, and poultry.

The only slightly-concealed spearhead of the Flemming drive is aimed at the alleged "mis-use" aspect of agricultural chemicals through which avenue Mr. Flemming senses the Achilles' heel of the Miller amendment to the FDA law.

$200,000 Fertilizer Plant Announced

MT. VERNON, MO. — McQuerter Chemical Co. has announced plans for the construction of a $200,000 fertilizer plant at a new industrial park site here.

The plant will service approximately 22 counties in southwest Missouri.

Plans for financing the construction of utilities on the 33 acre site are being undertaken by the Mt. Vernon Industrial Development Corp. through the sale of shares in the corporation.

Construction is now underway, and it is expected that it will be completed sometime next spring.

Loryn E. McQuerter is president and manager.

Commerce Department Reports . . .

Fertilizer Production, Sales Reach New Heights in 1959

WASHINGTON — Fertilizer production and sales attained new heights in 1959, approximately 10% ahead of 1958, the Business and Defense Services Administration, U.S. Department of Commerce, reported. Heavy demand for all types of fertilizers reduced producers' inventories at the end of the spring peak to lower than normal levels.

Activity in the fertilizer industry is expected to continue high in 1960, and consumption is anticipated at about the same level as in 1959. A few spot shortages in phosphoric acid and ammonium sulfate may occur during the spring peak, but fertilizer supplies, in general, should be adequate in 1960. Little change in foreign trade in fertilizers is foreseen for 1960 and dollar value of imports and exports is expected to be in approximate balance.

Shipments of fertilizers (using the Bureau of the Census industry definition) are valued at an estimated $900 million in 1959. When the value of

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Inside You'll Find

Sulfur Consumption Recovers from Decline

NEW YORK—Consumption of sulphur in the U.S. recovered from a two-year decline in 1959 to reach a new record high.

In an annual review Langbourne M. Williams, chairman of Freeport Sulphur Co., said that the use of sulphur reflected the pick-up of business by major consuming industries such as fertilizer, chemicals, paper, pigments and rayon. Although demand by the steel industry dropped as a result of the strike, Mr. Williams added, the weakness in this market was more than offset by the prosperity of most of the other consuming industries.

Consumption of sulphur in all forms, according to preliminary estimates, was about 6,000,000 long tons —an increase of better than 10% over 1958. The previous record of 5,800,000 tons was established in 1956.

Exports of sulphur rose to a near-record level. Such shipments were estimated to have exceeded 1,600,000 tons.

Domestic sulphur production was up slightly in 1959, Mr. Williams said. Output from all sources amounted to an estimated 6,225,000 long tons, compared with 6,140,000 tons in 1958. Most of the increased demand was met from stockpiles of producers, who cut back stocks from 4,000,000 tons to about 3,400,000 tons.

Imports of sulphur, although at a high level, failed to maintain the sharply rising trend begun in 1955 with the development of Frasch hot-water process mines in Mexico, Mr. Williams said. Total imports—including Frasch from Mexico, recovered sulphur and the sulphur content of pyrites from Canada—about equaled the 755,000 tons shipped in 1958.

California Board Adopts Resolution On Spray Residues

SACRAMENTO — The California State Board of Agriculture recently adopted a resolution requesting the U.S. Food and Drug Administration to "announce the analytical methods and their sensitivities" on which a zero pesticide tolerance is based and on which "no residue" usage has been accepted.

The complete resolution:

Whereas, agriculture in the state of California is so vital to the health and welfare of the people of the state and the nation, producing as it does a greater amount of agricultural commodities than any other state, and

Whereas, effective and suitable pesticides are needed to control agricultural pests and provide agricultural commodities of high quality, and

Whereas, a large portion of California's agricultural production moves interstate and is, therefore, subject to federal requirements concerning pesticide residues, and

Whereas, numerical tolerances have been adopted for many pesticide chemicals on many crops, zero tolerances have been adopted for other pesticides on other crops, and additional pesticide uses have been accepted on the belief that their use imparts no residue on the marketed crop, and

Whereas, it is feasible to determine whether or not produce meets a numerical tolerance, no chemical method can show the complete absence of any residue at all, which is necessary to meet a zero tolerance or "no residue," and

Whereas, in administration of the Spray Residue Article of the Agricultural Code, the Department of Agriculture has the responsibility of determining if produce is legal under the meaning of the federal tolerances,

Therefore, be it resolved, by the California State Board of Agriculture, meeting in Sacramento, Cal., on Dec. 21, 1959, that the Federal Food and Drug Administration be requested to announce the analytical methods and their sensitivities on which any zero tolerance is based and on which any "no residue" usage has been officially accepted, and

Be it further resolved, if further data on pharmacology or analytical methods cause re-evaluation by the Federal Food and Drug Administration, due announcement shall be made regarding the new status of the pesticide chemical.

Spray School Program Set for January 27-28

URBANA, ILL.—The latest information on the effectiveness of granular and liquid herbicides will be one of the topics featured at the Illinois Custom Spray Operators' training school Jan. 27-28 at Urbana.

For several years the effectiveness of these herbicides has been questionable, explains H. B. Petty, chairman of the school, and extension entomologist with the University of Illinois and Illinois Natural History Survey.

The custom spray school is planned for all persons associated with the agricultural chemical industry, including aerial and ground spray operators, industry representatives and agricultural chemical salesmen and dealers. In addition, any other interested persons may attend, Mr. Petty says.

Some of the other topics to be discussed include: (1) New developments in controlling face flies, (2) turf diseases and lawn weeds, (3) soil insecticides and (4) the relation between weeds and crop yields.

The school will be held in the Illini Union Building on the University of Illinois campus.

Weed Control Weapon Unveiling Scheduled

SACRAMENTO—The latest anti-weed weapons of science will be unveiled at Sacramento Memorial Auditorium Jan. 19-21 when members of the California Weed Conference assemble for their twelfth annual meeting.

C. Bruce Wade of Redding, Cal., conference president, said the conference theme, "Weeds Are Everybody's Business," is particularly appropriate in view of California's estimated million dollar a day weed toll. Mr. Wade also is agricultural commissioner of Shasta County.

Leading weed authorities of California will discuss various phases of weed control at the opening session beginning at 1:00 p.m. on Jan. 19. Following the official welcome by Mr. Wade, a special report of the activities of the Statewide Weed Control Committee of the state Chamber of Commerce will be made by J. Earl Coke, vice president of the Bank of America, San Francisco. Weed control experts will discuss new developments in herbicides, weeds in forest plantings, field observations with wetting agents and secondary weed invasions.

Sessions on following days will be devoted to a wide array of weed problems. A panel on regulatory considerations in weed control has been arranged for the special benefit of those interested in this phase of weed control. Registration of herbicides will be discussed by representatives from the Bureau of Chemistry, California Department of Agriculture, and the U.S. Food and Drug Administration.

Regulatory weed control in Australia will be reported by an official of the State of Victoria.

Of special interest to highway engineers will be a panel on pavement weed control, contracts and bid specifications, materials and application techniques.

One of the highlights of the conference will be the report of the research section. Topics include perennial herbaceous weeds, perennial woody weeds, agronomic crop weeds, vegetable crop weeds, vegetation control on rights-of-way and industrial sites, aquatic weeds, chemical and physiological studies, application equipment, plant ecology and biological weed control.

A panel of weed control authorities will report on new developments in chemical weed control and answer questions at an evening session Jan. 20 in the Empire Room of Hotel Senator. The subject of the session is "What's New in Weed Control?" Bryant Washburn of the Washburn Agricultural Service, Davis, will serve as moderator.

Other subjects for the three day session include physical characteristics of invert emulsion, low pressure nozzles, place of cluster type nozzles, granular herbicides and soil incorporation of herbicides.

California Hearing Held; View Quarantine Changes

SACRAMENTO — The California Department of Agriculture held a hearing here Dec. 7 to consider changes in the California Cotton Pests Exterior Quarantine.

Changes proposed by the department include removal of restrictions on entry of compressed, baled lint, linters and cleaner waste and on trade samples of lint and linters unless contaminated with cottonseed or restricted cotton products capable of harboring the boll weevil or pink bollworm.

The California Department explained that it was endeavoring to remove needless restrictions wherever possible without lessening protection to cotton production in California against the entry of the boll weevil and the pink bollworm, neither of which occurs in this state.

FIRE ANT CONTROL?

AUBURN, ALA.—A major breakthrough in Southern farmers' fight against the pesky imported fire ant may be just around the corner!

Use of poison baits to rid land of the mound-building fire ant shows promise of being the best and safest method available. Possibilities of using baits was discovered in research by entomologists of the Auburn Agricultural Experiment Station.

Research information gained in Alabama could well change the entire approach to the problem of fire ant control, according to the project leaders Sidney Hays and Dr. F. S. Arant, zoology-entomology department.

Chase Bag Names New Plant Manager

NEW YORK — Charles S. Wicks has been named manager of the Chase Bag Co. manufacturing plant in New Orleans, announced F. H. Ludington, Jr., vice president and treasurer. He succeeds D. H. Denholm, who has resigned to enter business in Alabama.

The New Orleans plant recently installed full scale facilities for the manufacture of Chase Polytex polyethylene bags. It was established in 1930 and also produces Saxolin open mesh, cotton and burlap bags and specialty products for domestic and export markets.

Mr. Wicks has been chief industrial engineer for Chase, heading the firm's industrial engineering department in St. Louis with which he has been associated since 1953. He joined the Chase Bag Co. in 1930 and has also been connected with its branches in Cleveland and Goshen, Ind.

Program Set for New Mexico Conference

UNIVERSITY PARK, N.M. — Frank Irons, Agricultural Research Service, U.S. Department of Agriculture, Wooster, Ohio, will be the featured speaker at the third annual Agricultural Chemical Conference Jan. 13 at New Mexico State University here. Mr. Irons will discuss ground and air application techniques of pesticides.

A former researcher at the NMSU Experiment Station, John E. Chilton of the Arizona Fertilizer Co., Phoenix, is slated to review some of the problems associated with cotton defoliation.

A research and industry team, Stuart R. Race, assistant entomologist with the university's department of botany and entomology, and Joe Diaz of the Shell Chemical Corp., Phoenix, will discuss preventive and remedial control of cotton insects.

Current research in cotton seedling disease will be summarized by Charles R. Maier, assistant plant pathologist with the botany and entomology department.

The conference will also feature information on the control of plant parasitic nematodes, alfalfa insects, lettuce insects, cattle grubs, weeds and household and ornamental plant pests.

EXECUTIVE RETIRES

WILMINGTON, DEL. — Philip B. Stull will retire this month from Hercules Powder Co. upon completion of 33 years as an executive with the company, including 27 years as a member of Hercules board of directors. Mr. Stull resigned as a vice president, member of the board of directors and of the executive committee of Hercules at the end of last year. Throughout 1959, he has been on special assignment.

DAVISON AWARD—Perry O. Onstot, agronomist and mixed fertilizer promotion manager, W. R. Grace & Co. Davison Chemical Division, is shown receiving the 1959 Marlin G. Geiger Award—$1,000 and an illuminated scroll—given annually in recognition of special services to the company by a Davison employee. Mr. Geiger, who is executive vice president of Grace in charge of chemical divisions, presents the award to Mr. Onstot.

Perry O. Onstot Wins Davison Award

BALTIMORE — Perry O. Onstot, agronomist and mixed fertilizer sales promotion manager, W. R. Grace & Co. Davison Chemical Division, has been named as the 1959 recipient of the Marlin G. Geiger Award, given annually to a Davison employee who has made outstanding contributions to the progress of the company. The award is $1,000 and an illuminated scroll.

Mr. Onstot was chosen for his development of the Davco Crop Feeding Program. In this, Davison representatives cooperate with farmers and state and county agricultural authorities in preparing crop feeding recommendations which take into consideration past history of the farm, current soil conditions as revealed by unbiased laboratory tests, and future rotation plans.

Dr. Russell Coleman, executive vice president of the National Plant Food Institute, has called Mr. Onstot's plan "one of the most constructive programs which I have seen used by an individual company in our industry."

The presentation of the award was made jointly by Mr. Geiger, executive vice president of W. R. Grace & Co. in charge of chemical divisions, and W. E. McGuirk, Jr., president of the Davison division.

Weather Blamed for Surprise Results On Illinois Morrow Plots During 1959

URBANA, ILL.—Dry weather and varied soil treatments produced some surprise results in 1959 on the University of Illinois Morrow Plots. Corn yields ranged from 26 to 95 bu. an acre. On one plot that has grown corn continuously since 1876 without any soil treatment, yield averaged 26 bushels an acre compared with 31 bushels in 1958.

But the 1959 yield dropped most on a continuous plot that had received no soil treatment until 1955 but has had a complete lime, nitrogen, phosphorus and potassium treatment since then. This plot yielded only 56 bu. an acre compared with 130 bu. in 1958.

A. L. Lang and L. B. Miller, agronomists, explain this yield slump in this way:

For 79 years the soil on this plot was allowed to become seriously depleted in plant food nutrients and organic matter. With heavy fertilizer treatments during the past four years, along with favorable rainfall, yields have averaged 109 bu. This average compares with only 34 bu. on the no-treatment plot.

But dry weather in 1959 provided the real test in this new phase of the long-time continuous corn study. Even though the soil had plenty of nutrients, it did not have the water-holding capacity to supply the corn during severe drouth.

On the other hand, another continuous corn plot receiving a manure-lime-phosphate treatment since 1904 produced 83 bu. an acre. This was only 1½ bu. less than in 1958 and only 5 bu. below the 1955-58 average. Even though this plot has grown corn every year, it has had good management. The soil had a reserve of organic matter and high water-holding capacity. Yields climbed to 95 bu. on a plot receiving continuous manure-lime-phosphate treatment since 1904 and extra nitrogen-phosphate-potash fertilizer since 1955.

The agronomists point to this major lesson from the 1959 experience: Where soils have a history of good soil management that maintains and builds up organic matter in the soil, yields will suffer the least during dry years.

Results were similar for corn yields in the corn-oat rotation plots. Where the soil had received no treatment, yields averaged 45 bu. compared with 49 bu. in 1957. On the plot receiving no treatment until 1955 and lime, nitrogen, phosphorus and potash since then, corn yields averaged 91 bu.

Yields climbed to 95 bu. on the plot receiving the manure-lime-phosphate treatment since 1904.

The treated plots were all planted at the rate of 16,000 an acre. The agronomists consider this the ideal rate for highly productive soil with such fertilizer treatments as this. They say there is no evidence that this planting rate hurt yields in 1959.

Rainfall during 1958 and 1959 on the Morrow Plots presents a real contrast. L. A. Joos, state climatologist with the U.S. Weather Bureau at the university, reports that June, July and August rainfall totaled 5.07 in., less than one half of the normal 10.96 in. for these months and less than one third of the 17.94-in. downpour in 1958. Mr. Joos recalls that during the 41 days ending on July 22 only .24 in. fell on the plots.

The Morrow Plots, located near the center of the University of Illinois campus, were started in 1876. They are the nation's oldest soil experiment field.

Consultant Moves Into Office in Baltimore

BALTIMORE, MD. — A. Edison Badertscher has moved into his new office in Baltimore, where he will consult on insecticides, pet products, insect repellents, and soluble plant foods, as well as the preparation of labels on products that fall under the Federal Insecticide, Fungicide, and Rodenticide Act. Since 1931 he has been connected with McCormick & Co., Inc., Baltimore, as chief entomologist and horticulturist. The Science Center building houses two organizations, Insect Control & Research, Inc. and the American Bio-Chemical Laboratory, Inc. Dr. Badertscher will be associated with Insect Control & Research, Inc., as a consultant. This firm is under the direction of Dr. Eugene J. Gerberg.

A. E. Badertscher

IMC Announces New Agricultural Scholarships

CHICAGO — Establishment of a program of scholarship and fellowship awards in the field of agriculture and mining was announced by International Minerals & Chemical Corp. at a dinner Dec. 10 in honor of Louis Ware, IMC chairman of the board, on his 20th anniversary with the company.

Called the "Louis Ware Scholarships for Outstanding Achievement in Agricultural and Mining Sciences," the program provides for twelve $1,000 senior year scholarships to students interested in pursuing graduate studies in the areas of mining and agriculture. The six students in each area would then compete, during their senior year, for a $3,000 annual fellowship leading to a doctorate degree.

Grant Issued to Study Johnson Grass Control

FAYETTEVILLE, ARK.—The University of Arkansas' Agricultural Experiment Station has received a grant-in-aid to support research on a problem that has plagued Arkansas farmers for a long time—how to control Johnson grass in their fields.

The $1,000 grant, from the Stauffer Chemical Co., is for the period Jan. 1 through Dec. 31, 1960, according to Dr. John W. White, vice president for agriculture.

It will make possible expanded research on the use of herbicides for controlling Johnson grass prior to the planting of such agronomic crops as soybeans, cotton, and corn. Dr. R. E. Frans, associate agronomist, is project leader of the herbicide research work.

Texans Spray 800 Acres In Fire Ant Battle

DALLAS, TEXAS—Some 800 acres of land just north of the University of Dallas were sprayed with insecticide in an aerial "dusting" operation recently to control fire ants infesting the area. The U.S. Department of Agriculture supervised the project.

Agriculture agents reported a light to moderate infestation in the isolated area. Residents had been forewarned.

The M&M Air Service of Beaumont applied 10% granular Heptachlor insecticide.

"They (fire ants) generally pick an isolated spot to lay their eggs," said W. B. Frederick, a Texas Department of Agriculture inspector. "They're pretty well confined to this one area."

Arizona Fertilizer Meeting to Hear Banker

TUCSON, ARIZ.—Highlighting the banquet program at the third Arizona Fertilizer Conference next month will be a talk by Carlos E. Ronstadt, long time Arizona banker and director and vice president of the Southern Arizona Bank & Trust Co. Mr. Ronstadt will give his views on agricultural production credit and financing as it relates to proper fertilization practices. The banquet will commence at 7 p.m. at the Sands Motor Hotel in Tucson Jan. 20, at the end of the first day of the conference.

The conference, scheduled for Jan. 20-21 at the University of Arizona, Tucson, is expected to attract many fertilizer industry representatives, University of Arizona and USDA personnel, and growers from nearby western states.

Among the topics for discussion are latest developments in University of Arizona crop fertilization research, the basis for fertilizer recommendations on Arizona crops, crop fertilization planning from the grower's viewpoint, fertilization formulation and control and fertilizer industry research needs.

The conference is presented by the University of Arizona in cooperation with the Arizona Agricultural Chemicals Assn. and the National Plant Food Institute. Dr. R. B. Bahme, NPFI western regional director, and Dr. Wallace Fuller, head of the University of Arizona's department of agricultural chemistry and soils, have worked closely together in setting up the program.

Chairmen for the conference are Dr. Malcolm McVickar, California Spray-Chemical Co., and Ed Gould, Shell Chemical Corp., both of San Francisco.

Colorado Fertilizer Meeting Set for January

FORT COLLINS, COLO. — Researchers at the Colorado Agricultural Experiment Station here will discuss the latest developments in using fertilizers at the eighth annual Colorado Fertilizer Conference here Jan. 7-8.

The annual meeting is held to acquaint fertilizer dealers and users with up-to-the-minute information on new products, procedures and results obtained in various test projects.

Topics of the two-day program will include use of combined insecticide-fertilizer mixtures, how to figure value as related to cost of fertilizers—and effects of different fertilizers on different crops.

Winter Mites Noted In Texas Oat Fields

STEPHENVILLE, TEXAS — Winter mites have been reported in several oat fields of this area, according to R. G. Burwell, district agent for the Texas Agricultural Extension Service.

Several other sections of the state are also infested with these small grain mites, which thrive during the cooler months. The first hatch comes off in the fall and are found about Nov. 1. The second generation comes along in January, as a result of eggs deposited by the first infestation.

Seed Group Elects

CORVALLIS, ORE. — Roy Stevenson, Madras, was elected president of the Oregon Seed Growers League during the group's 19th annual meeting here. He succeeds R. W. Schaad of LaGrande. Other officers are Don Hector, Corvallis, vice president; Rex Warren, Oregon State College, secretary, and Ira Strauss, Corvallis, treasurer. New directors are Paul Neuman, Clatskanie and Goldie Marcott, Sublimity.

Dr. T. W. Brasfield

Velsicol Names T. W. Brasfield Director of Marketing

CHICAGO—Appointment of Dr. T. W. Brasfield as director of marketing, Velsicol Chemical Corp., has been announced by John F. Kirk, vice president.

Dr. Brasfield attended the public schools of Slaton, Texas, obtained his B.A. degree from the University of Arkansas and his M.S. and Ph.D. degrees from the State University of Iowa, with majors in the chemical and biological fields.

Dr. Brasfield was senior research assistant at Iowa, head of the biology department at Junior College, Parkinston, Miss., and a lieutenant colonel in the U.S. Air Force. He comes to Velsicol from Naugatuck Chemical division, U. S. Rubber Co., where he held successively the positions of research plant pathologist; product manager, agricultural chemicals; sales manager, agricultural chemicals; West Coast district manager, and manager of kralastic sales.

In his new position, Dr. Brasfield will be responsible for all of Velsicol's marketing activities in the U.S. including agricultural and pest control chemicals, resins, solvents and inorganic chemicals.

Wisconsin Pesticide Meeting Scheduled; Speakers Set

MADISON, WIS.—The Wisconsin Pesticide Conference with Industry will be held Jan. 6-7 at the Wisconsin Center Building, University of Wisconsin, Madison.

The program will be highlighted by discussions from members of the departments of entomology, plant pathology, agricultural engineering, agronomy and horticulture. Also scheduled to speak are county agents, USDA representatives and a member of the forest pathology department at the university.

Illinois 6-Month Sales Establish Record High

URBANA, ILL. — Illinois fertilizer sales for the first half of 1959 topped all previous six-month periods. The University of Illinois agronomy department bases this report on data supplied by 73 fertilizer manufacturers in the state.

Tonnages of mixed and nitrogen fertilizers were 20% above those of the same period in 1958. Use of soluble phosphate, potash and rock phosphate remained about the same.

Among mixed fertilizers, over half of the tonnage continued to be in the 1-1-1 and 1-4-4 ratios. There were also increases in such ratios as 3-1-1 and 2-1-1, which account for part of the hike in nitrogen usage.

In straight nitrogen fertilizers, anhydrous ammonia showed the biggest rise, more than 50%. Increases of 10 to 40% were also reported for other major nitrogen materials.

REPORT

(Continued from page 1)

shipments of nitrogenous and potassic materials sold directly for fertilizer use is added, the total rises to $1.1 billion, which is equal to about .23% of the Gross National Product, .32% of the sales of all manufacturers, and 4.5% of the sales of all chemical manufacturers. The Department of Agriculture has estimated that in 1954 one-fifth of the average yield of all crops and pasture could be attributed to the application of fertilizer. In net value of farm production, fertilizers are responsible for some $3 billion.

Fertilizer production has approximately paralleled the increase of all industrial production. The Federal Reserve Board index for all industries rose from 112 in 1950 to a possible 149 in 1959, an average annual increase of 3.2%, and the Board's index for fertilizers increased from 106 in 1950 to a probable 145 in 1959, an average annual rise of 3.5%. This is not as fast a growth as the 6% average annual increase exhibited by chemicals and allied products during this period, nor as much as inorganic chemicals with 7.1%, but it is about equal to the 3.4% average annual growth of Gross National Product (constant dollars) over this period.

A close relationship might be expected between fertilizer production and farm Gross National Product, because farms are the chief markets for fertilizers. However, the relationship has not been close from year to year since 1950. In years past, farm income seemed to have a close relationship with sales of fertilizers in the ensuing year, but this correlation has been less pronounced in recent years because of the increasing use of fertilizers in areas where little was applied 30 years ago. Moreover, nonfarm use of fertilizers for home gardens, lawns, roadsides, parks, golf courses, etc., has increased.

Ample raw materials are available domestically. The earth's atmosphere provides most of the nitrogen by the chemical fixation process. Phosphates and potash from mineral resources are plentiful. All three raw materials must be chemically processed into suitable fertilizer materials, but with a few minor exceptions no problem is encountered in making these conversions. An exemplary exception is the supply of ammonium sulfate, from which about 20% of the nitrogenous plant food is derived. The steel industry produces as a byproduct about half of the ammonium sulfate used for fertilizer. The low level of steel operations in 1958 and the strike in 1959 reduced available supplies of ammonium sulfate. The over-all effect of such a shortage on the fertilizer industry was not serious because byproduct ammonium sulfate accounts for only about 10% of the total nitrogen plant food supplied, and it can be largely replaced by other forms of nitrogen.

Imports, particularly of nitrogenous and potassic materials, were once a substantial part of the total U.S. supply, but are now only about 9% of the total. Exports approximately balance imports, and variations from year to year are not especially significant. On the other hand, technological changes are very definitely taking place. The plant food content of fertilizers has been steadily rising, brought about by greater concentration of the three basic elements (N-P-K). Although gross tonnage of fertilizers consumed has exhibited a leveling trend, the N-P-K plant food content tonnages have continued upward.

The industry's emphasis on higher-analysis products has meant larger capital expenditures by manufacturers for plant modification as well as new plant expansion. Increased expenditures brought about directly by changing technology cannot be measured. However, total construction costs for new chemical fertilizer facilities are scheduled at $115.8 million during the three-year period 1958-60, according to the construction survey of a chemical trade association.

The principal effect of changing product emphasis is on the dollar value of sales. Fertilizer materials are generally priced competitively on the basis of each of the primary plant foods (N, P_2O_5, K_2O). When increases in capacity occur, competition becomes strong. Some price weakening and granting of off-season discounts have occurred. Although the total value of fertilizer sales was up in 1959 because of the greater tonnage delivered, average prices per ton paid by the farmer, according to USDA, were less than in 1958. Prices of nitrogenous and potash fertilizers were 3% and 1%, respectively, lower than in 1958 although prices of superphosphate were up slightly.

Trends in 1959

Fertilizer production and consumption in 1959, in terms of total plant food, are expected to be approximately 10% higher than in 1958. The increase is expected to be greater than the annual increments of several preceding years. Gross tonnage is expected to exceed 24 million tons in 1959.

Approximately 70% of the annual consumption of fertilizers occurs in the first half of the year and movement from producer to consumer of this proportion is largely concentrated in the three spring months, March, April, and May. The magnitude of the demand last spring caught some suppliers by surprise and difficulties were experienced at times in transportation and in meeting customers' delivery demands. Producers' inventories of most fertilizer materials were reduced to lower levels than usual by the end of the season. Some replenishment of stocks occurred during the summer months, but demands for fall application were also favorable for that season, so it is uncertain whether end-of-the-year inventories attained the level of those in 1958.

The 1960 Outlook

Heavy demand for fertilizers and accompanying depletion of inventories, which occurred during the 1959 spring season, may influence producers to operate at a somewhat higher rate and build up stocks to a greater extent during the early months of 1960 than they did in 1959. Little change, compared with 1959, will be possible during the spring months in production of two of the basic products, ammonia and phosphoric acid, because producers of these materials operated close to capacity last spring. Inasmuch as ammonia and phosphoric acid may be sold and used, as such, for fertilizer or may be converted to various other fertilizer materials, suppliers face the problem of anticipating demand for several interrelated products and manufacturing the right amount of each in order to distribute adequately their output. Phosphoric acid and ammonium sulfate may be slightly short of demand during the spring peak, but fertilizer supplies, in general, are expected to be more than adequate in 1960.

The decline in farm income during 1959 may have some adverse effect on fertilizer purchases in 1960. However, this income decline probably will have less effect than during comparable previous years. The trend today in agriculture, as farming costs rise, is to make use of more fertilizer so as to maximize returns on the investment in the new crop. Little change in imports and exports of fertilizer are foreseen in 1960. The dollar values of incoming and outgoing shipments are expected to be in approximate balance.

CFA Subscribes to 15c Tax on Fertilizer; Not 20c as Reported Earlier

SACRAMENTO, CAL.—An error in a news release reporting the action of the California Legislative Senate Fact Finding Committee concerning the fertilizer and agricultural minerals tonnage tax, resulted in an incorrect story in Croplife's issue of Dec. 21.

The story as it came to Croplife from California said the California Fertilizer Assn. had agreed to a tax of 20¢ a ton on fertilizer and 6¢ a ton on agricultural minerals. The report should have read 15¢ on fertilizer and 5¢ on agricultural minerals, according to Sidney H. Bierly, general manager of the CFA at Sacramento. He explains as follows:

"Your editors apparently picked up a story from the press wire services concerning a public hearing of the California Legislative Senate Fact Finding Committee, held in Sacramento on Dec. 1, 1959. This story was reported on page 23 of the Production Issue of Croplife.

"In this article we were quoted as having joined with the California Departments of Agriculture and of Finance in suggesting a tonnage tax of 20¢ on fertilizer and 6¢ on agricultural minerals. This was definitely in error, and I am sure the official transcript of the hearing will bear me out.

"D. W. Galbraith, president of our association, made the statement for us and, since it was read from a prepared statement, there can be no question of what he said. In essence, he said that we favor a tax formula of 15¢ per ton on fertilizer and 5¢ on agricultural minerals, a 3 to 1 ratio, and, because of steadily increasing use of all the materials concerned, it should be no more than two or three years before income to the state fund will be balanced with expense. Meanwhile, it was pointed out, there is a substantial surplus in the fund. He called attention to the fact that the Finance Department representative had suggested the 15¢ and 5¢ formula in his appearance before a Legislative Committee held in Bakersfield in 1958, and that we supported these figures.

"At the December 1 hearing in Sacramento, however, the Finance Department did suggest the 20¢ and 6¢ ratio, but we did not subscribe to it.

"This is an unfortunate circumstance, for which we can certainly not hold your publication responsible in any way. Since the story apparently went out over the various wire service facilities, it has likely been published in a number of other publications. We are doubly concerned because of the reaction which we know our industry people will have on reading this story, which doesn't reflect their desires at all. It would be helpful if you will publish a correction, based on this information."

AVIATION GROUP ELECTS

NEW ORLEANS—K. V. Brugh, Jr., Greensboro (N.C.) High Point Air Service, was elected president of the National Aviation Trades Assn. at its annual meeting held here recently. The group named Robert E. Monroe as executive director to fill the vacancy created by the death last April of Charles A. Parker. Mr. Monroe had been acting in this capacity for the past six months.

Webfoot Fertilizer Buys 35,000 Sq. Ft. Building Next to Portland Plant

PORTLAND, ORE.—The purchase of a 35,000 sq. ft. building, adjoining its local plant, has been announced by Alec Runciman, Webfoot Fertilizer Co. Mr. Runciman reports that acquisition of the new facility is the second step in a long range expansion program. Two years ago the company erected a concrete warehouse facility next to its main plant for storage of its sacked fertilizer.

The new building is located at 201 S.E. Washington St., and is one and one half stories with a full basement. It was formerly a storage area for Liberty Transfer and Storage Co., and its acquisition extends the Webfoot plant the entire length of S.E. Second Ave. from Stark to Washington Sts. Total square footage of the plant now is in excess of 50,000.

Webfoot Fertilizer will move its offices from its present Stark St. location into the larger facilities available in the new building. In addition the building contains additional tenant offices with warehouse space available for each.

The plant is situated on a Union Pacific spur which will permit loading and unloading of four rail cars simultaneously and make use of 10 loading docks, four of which are covered. The docks are designed and so situated that the largest of highway transports can load and unload within a minimum time.

Webfoot Fertilizer was founded in 1933 by F. E. Peterson. The original plant was located on Columbia Blvd. in northeast Portland and served the Willamette Valley and southwest Washington areas. In 1942 the plant was moved to its present location.

Mr. Runciman joined the firm in 1948 and now is in charge of the active management of the company.

Thomas H. Lathe Retires from Meyer

SAN FRANCISCO — After 32 years' service, most of them in charge of agricultural sales in the Pacific Southwest for Wilson & Geo. Meyer & Co., Thomas H. Lathe has retired to consultant status, Jan. 1, at his own request, Jeffery W. Meyer, president of the firm, announced. Mr. Lathe joined the firm in San Francisco in 1928. In 1932, he was sent to Los Angeles to open a branch office and has lived in the Southland ever since.

Thomas H. Lathe

A native of Baltimore, Mr. Lathe attended the University of Maryland. He served in the Navy in World War I, as private secretary to Admiral W. S. Benson, wartime chief of naval operations, and was in close association with the then assistant secretary of the navy, Franklin D. Roosevelt.

After World War I he came West in 1920 and for several years before joining the Meyer firm, he was associated with General Steamship Co. in San Francisco.

Mr. Lathe and his wife will settle in eastern Los Angeles County and from this base of operations he expects to engage in fishing, hunting and playing golf while continuing his consulting capacity to the Meyer firm in agricultural matters.

Allied Chemical Names Field Sales Manager

NEW YORK—The appointment of George R. Blanchard as southeastern district field sales manager for agricultural chemicals of Allied Chemical's general chemical division has been announced by J. L. Damon, agricultural chemicals sales manager.

Mr. Blanchard will supervise sales of the company's broad line of insecticides, fungicides and weed killers.

Mr. Blanchard joined the company at its St. Louis, Mo., office in 1952 as an agricultural chemicals salesman. In 1954 he was transferred to the sales staff of the Charlotte, N.C., office. His present headquarters are at Orlando, Fla.

Mr. Blanchard is an alumnus of Arkansas State College with a B.S. degree in agriculture.

PURCHASES PLANT

PHOENIX, ARIZ. — Arizona Fertilizer and Chemical Co. has announced its purchase of the Arical Co. of Blythe, Cal., producer of insecticides and fertilizers for the Palo Verde Valley of California and Parker area of Arizona. Frank M. Feffer, president of Arizona Fertilizers, said his firm's purchase of the Blythe plant is the first step in an expansion program for the company.

Californians Harvest Record Breaking Crop

SACRAMENTO, CAL. — California farmers set a new record for crop production in 1959 by harvesting 31.9 million tons, according to the California Crop and Livestock Reporting Service at the California Department of Agriculture.

The service said California's record resulted from a combination of a record large acreage harvested and high yields obtained in 1959.

The 1959 crop production is 6% larger than the previous record of 30.2 million tons produced in 1957.

Production at this level was achieved in spite of 1959 having been one of the driest years on record. The record production clearly demonstrates the advantage enjoyed by irrigated agriculture, since most of the state's crop land is irrigated.

Field crop acreage and production set new records in 1959. Fruit production was near a record and was over one-fifth larger than the light 1958 crop. Vegetable production was down about 6% from 1958 because of a smaller tomato crop. Growers harvested the third largest tonnage of record in 1959, however.

W. E. Warne Named State Agriculture Head

SAN FRANCISCO—Gov. Edmund G. Brown announced the appointment of William E. Warne, now director of the Department of Fish and Game, as the new state director of agriculture.

Mr. Warne, 54, a former assistant secretary of the interior under President Truman, came to his present state post from service as U.S. economic coordinator for foreign aid in Korea.

Mr. Warne succeeds W. C. Jacobsen in the Department of Agriculture. Mr. Jacobsen, who passed the retirement age earlier this year, stayed on at Gov. Brown's request until a suitable replacement could be found.

Richard W. Bagley Joins Sevin Product Group

NEW YORK — Appointment of Richard W. Bagley to the Sevin product group, Crag Agricultural Chemicals, has been announced by Union Carbide Chemicals Co., Division of Union Carbide Corp. An experienced entomologist, he will assist in development of new Sevin insecticide, under direction of Dr. Richard C. Back at the company's New York City office.

Richard W. Bagley

For five years Mr. Bagley was a member of the cotton insect control research group sponsored by Sociedad Nacional Agraria, Lima, Peru. He participated in all phases of economic entomology on cotton, and worked under Dr. Frank L. Thomas, former professor of entomology at Texas A&M, who headed the Lima organization. Later, Mr. Bagley became chief entomologist of this technical group. Prior to his work in Peru, Mr. Bagley was engaged in the supervised control program on cotton insects in California and Arizona.

Diamond Puts BHC on New 'Direct Sales' Schedule

CLEVELAND, OHIO — Diamond Alkali Co. has announced a "direct sales" price schedule for technical benzene hexachloride, by which low-gamma BHC in carload lots or truckload quantities is priced at .056¢ a gamma unit in bags, or .050¢ a unit in bulk. High-gamma BHC is now .065¢ in bags.

Previously, Diamond, along with most other suppliers, sold pesticides to formulators on a consignment basis.

USDA to Test Fly Eradication On Pacific Islands

WASHINGTON — Isolated Pacific islands will be used soon to test new insect-control techniques involving male-fly sterilization and male-fly annihilation for eradication of both the melon and oriental fruit fly, the U.S. Department of Agriculture reported.

The male-fly sterilization method —involving release of large numbers of male flies sterilized by irradiation —was successfully used to eradicate the screwworm from the Island of Curacao and from the southeastern U.S. Male-fly annihilation is a new method of possible eradication in which male flies are lured to poisoned bait by a special attractant.

Edward F. Knipling, Leroy D. Christenson, and Loren F. Steiner, entomologists of USDA's Agricultural Research Service, along with representatives of the Navy and Trust Territory, selected Rota in the Mariana group, 30 miles from Guam, and the Bonin islands, 450 miles south of Japan, for the evaluation tests. Both eradication methods have been under investigation at the ARS Fruit Fly Laboratories in Hawaii and Mexico.

Research on the sterile-male method of control of the flies, which has been so successful in its application to the screwworm, has progressed to a point where field trials are indicated. Tentative plans are being developed in cooperation with the U.S. Navy and Trust Territory to test the sterile-male method on both the melon fly and oriental fruit fly on Rota. This island has an area of only 33 sq. miles and is infested with both pests.

ARS scientists estimate that about 3,000,000 fruit flies will have to be produced and sterilized by radiation each week for distribution by airplane on Rota for this test. It may be necessary to continue this distribution of sterile flies for a year or more to achieve complete eradication of the pests.

The rugged Bonin islands, with a total land area of about 27 sq. miles, are ideally suited for testing the possibilities of controlling the oriental fruit fly by the male-annihilation technique. These islands have a natural infestation of this important fruit fly.

Oregon to Study Agricultural Chemical Use

SALEM, ORE.—The use of chemicals in agriculture will come before a study committee which will sift out and evaluate present information in this field, the Oregon Board of Agriculture was told recently.

Frank McKennon, director of agriculture, told the board that he and Dean F. E. Price of Oregon State College have held preliminary discussions toward calling together a selected committee early in 1960.

Representatives will be asked to participate from the state board of health, chemical companies, ground and air applicators and others directly concerned with the problem.

In connection with the discussion of spray residues, the board approved the stand taken by the state department of agriculture in the recent cranberry situation. Members agreed with Mr. McKennon that the first concern is for the needs of the public and its welfare but that within this framework the needs of agriculture should also be guarded.

Ward Spatz, Medford horticulturist, referred to the need for sprays on fruits, but said, "I cannot see for the life of me why growers should not follow the recommendations made for the use of these products."

Mr. McKennon reported that the department has found no amino triazole contamination in cranberries analyzed in its laboratories.

PINK BOLLWORM CLEAN-UP

UNIVERSITY PARK, N.M.—This year pink bollworms cost one farmer in southern New Mexico $5,100 on a small cotton acreage. That is how destructive this insect can be, warns John J. Durkin, entomologist with the New Mexico State University Extension Service.

On four acres, the farmer harvested only a half-bale of poor-quality cotton per acre from a potential two and one-half bale crop. Another 17 acres which also had prospects of yielding about two and one-half bales per acre produced only one bale an acre.

This was probably one of the greatest pink bollworm losses suffered by a New Mexico cotton farmer in 1959, but it's an example of what can happen to other cotton farmers if they don't band together and fight this destructive pest on an area-wide basis, Mr. Durkin says.

The pink bollworm is a definite threat to cotton production in southern Dona Ana County and the El Paso area. This year about 300 acres in the southern area of New Mexico had noticeable pink bollworm damage, the entomologist states. Several hundred more acres of cotton in the El Paso-Ysleta area and around Juarez had damage ranging from very light to a total loss.

A very small number of pink bollworms infest all cotton acreage throughout New Mexico. But in areas north of El Paso, the pink bollworm moths lay eggs so late in the season and in such small numbers that the worms can't even be found in the field. The only way that they are detected in these northern areas is by inspecting the lint cleaners where many of the worms are thrown out and killed in the ginning process. However, the pink bollworm does exist in all cotton growing areas of New Mexico and wherever an insect can exist, it will always be a potential threat to the crop it feeds on.

New Virus Disease Of Beans Discovered At New York Station

GENEVA, N.Y.—A virus disease of beans believed to be closely related to, if not identical with, "stipple streak," a serious disease of beans in Holland but not heretofore found in this country, has been isolated and identified in some breeding material at Cornell's New York State Experiment Station here.

The virus is known as the tobacco necrosis virus which occurs naturally in the roots of a wide range of plants without causing symptoms either in the roots or in the above-ground parts of the plant, according to Dr. John J. Natti, station plant pathologist, in a recent issue of the "Plant Disease Reporter."

"However, juice pressed from the roots infected with this virus will cause localized necrotic spots on the leaves of susceptible plants inoculated with the virus," says Dr. Natti. He adds, however, that only a few plant species have been reported as becoming systemically infected with this virus.

In 1957 two bean plants in the station greenhouse and six plants in a breeding line in the field became infected with a disease thought to be of bacterial origin. Host range and transmission tests indicated that the disease was caused by a tobacco necrosis virus. "This is the first report of the natural occurrence in the U.S. of a systemic infection of beans caused by this virus," says Dr. Natti.

"The origin of the virus in the greenhouse and field is not known. Although this disease does not appear to be of economic importance in this country at this time, its potential seriousness should not be disregarded. All commercial bean varieties tested have proved highly susceptible, and because the virus can overwinter in the soil or in crop debris, beans should not be planted in fields in which the virus was observed the previous year."

SEEK DUTCH ELM CURE

KINGSTON, R.I.—Encouraging results have been found in experiments testing a number of chemical therapeutants to combat Dutch elm disease which cost the state of Rhode Island some 1,600 trees the past year and 1,900 the previous year. The method being sought is one that will cure infected elms through injection of the chemical into the tree.

John J. Rego, state director of agriculture and conservation, said he would request an appropriation of $60,000 for control measures during the coming year.

G. C. Matthiesen

John L. Thieman

Allied Appoints Two in Sales Post Changes

NEW YORK—The appointments of G. C. Matthiesen as Midwest sales manager, direct application materials, and John L. Thieman, regional product supervisor, direct application materials for the Nitrogen Division of Allied Chemical Corp. were announced by Malcolm E. Hunter, division vice president in charge of sales.

A native of Le Mars, Iowa, and a graduate of Iowa State University, Mr. Matthiesen has been assistant to the manager of fertilizer materials in New York. As Midwest agricultural sales manager, a newly created position, Mr. Matthiesen will supervise all direct application, fertilizer mixing and feed sales for the Midwest. He will continue to be located at division headquarters in New York. He joined the company in 1953 as a sales representative for direct application fertilizer sales in the division's Indiana district.

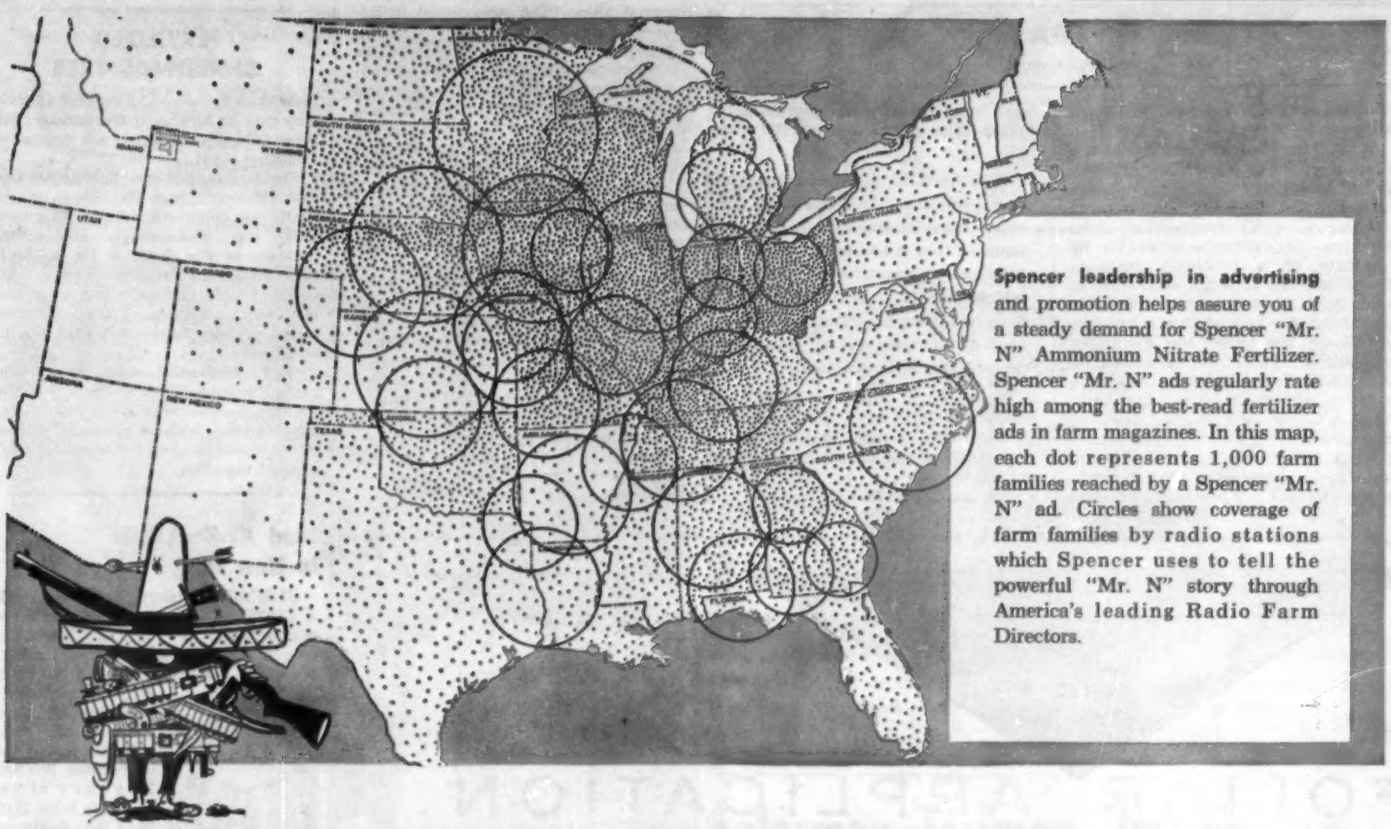
Mr. Thieman, a graduate of Ohio State University with a bachelor of science degree in agricultural economics, has been in fertilizer sales for Nitrogen Division since 1954. In his new position he will continue to be located in the division's Indianapolis, Ind., office.

Greenbugs Cause $3.1 Million Loss to Crops in Minnesota

ST. PAUL—Green bugs cost Minnesota farmers an estimated $3.1 million in 1959, according to John Lofgren, extension entomologist at the University of Minnesota.

Heaviest loss was in oats, where total damage and expenses were estimated at $2.7 million. Cost in wheat was about $260,000 and the loss was $194,000 in barley. Mr. Lofgren bases these figures on a survey by Minnesota county agents.

Green bugs infested about 410,000 acres of oats, 10% of the state acreage. Mr. Lofgren estimated the average loss to equal 30% of the infested oats acreage, for a total loss of 5 million bushels. Figuring 50¢ bu., that was $2.5 million alone. In addition, about 68,000 acres of oats were sprayed for green bug control, costing another $200,000.



Spencer leadership in advertising and promotion helps assure you of a steady demand for Spencer "Mr. N" Ammonium Nitrate Fertilizer. Spencer "Mr. N" ads regularly rate high among the best-read fertilizer ads in farm magazines. In this map, each dot represents 1,000 farm families reached by a Spencer "Mr. N" ad. Circles show coverage of farm families by radio stations which Spencer uses to tell the powerful "Mr. N" story through America's leading Radio Farm Directors.

You Don't Have To Wear Guns When You Sell Spencer Products . . .

You remember the old story about the guy who ran for sheriff and lost by a landslide. The next morning he showed up on Main Street with two big guns strapped around his middle.

"Why are you wearing guns?" asked an acquaintance. "You didn't win the election."

"That's right," answered the defeated candidate. "But a man with no more friends than I have needs to wear guns."

Leave Your Guns At Home . . .

When you sell Spencer "Mr. N" Ammonium Nitrate Fertilizer, you don't need to go armed. You don't need to worry about losing friends or customers because of inferior product performance. Also, you don't have to worry about whether or not it will sell.

Spencer "Mr. N" has long been the leading ammonium nitrate fertilizer in the Midwest. Wherever it has been introduced it has sold well. Dealers like to sell it. Farmers like to use it. And when they use it, they get results.

But Spencer doesn't try to convince farmers that nitrogen alone is the answer to all their fertilizer needs. Spencer realizes that farmers need to use mixed fertilizer, too — and constantly reminds farmers of this fact in "Mr. N" advertising. It's all part of Spencer's desire to help farmers get results. That makes more friends for Spencer and for you—and is another reason you don't have to wear guns when you sell Spencer "Mr. N."

On this page you'll find several other good reasons why Spencer is the brand to put your money on.

So look 'em over, amigo . . . and let's do business together!

Spencer leadership in packaging means you can sell "Mr. N" with confidence that it is in good condition. In fact it is guaranteed to flow freely even after a full year's storage under proper conditions.

SPENCER®

"Don't just fertilize . . . Spencerize"

SPENCER CHEMICAL COMPANY, Kansas City, Missouri

Producer of 4 Nitrogen Spencerizers for hungry crops

FDA

(Continued from page 1)

had "deliberately" mis-used this weed killer.

Next, Mr. Flemming moved into a small segment of the poultry industry to call attention to a "cancer-danger" in the use of fattening stimulants to produce a small fraction of total chickens—not turkeys—produced by implants of a synthetic hormone which effected artificial castration of male birds. Up to that time FDA has permitted the use of this estrogenic substance, but under the Flemming compulsion, FDA was required to reverse itself and order, with poultry industry agreement (they had nothing else to do)—withholding from the market of synthetically-castrated poultry. USDA then came through with an announcement that it would protect the poultry producers who had been using the synthetic hormone by taking their production off the market.

Last week FDA swung out again in a generalized indictment of the celery industry when it publicly announced that it had seized or halted in shipment quantities of celery on which there had been found residues of economic poisons which exceeded tolerance levels permitted under FDA authorizations.

Therefore, it may be seen that celery will follow cranberries into the garbage pail—or most surely consumer buying of the commodity will be deterred.

The celery episode is somewhat obscured since FDA announced in advance that it had halted shipments, whereas in the instance of cranberries it admitted that allegedly contaminated cranberries and its products had moved into distribution channels.

In the instance of poultry, FDA announced that it had changed its rules in the middle of a hand and that the hormone-treated poultry was no longer safe for human consumption since the presence of the hormone in certain parts of the poultry had caused cancer in test runs on rats.

So the secretary of Health, Education and Welfare, with apparent political aspirations, is beating the same tom-tom and is still carrying his torch that anything suspected of bearing cancer implications must be barred from human foods or animal feeds.

The secretary is treading on safe ground when he says in effect—"I am opposed to any compound which has been demonstrated to have produced cancer in test animals."

FERTILIZED CHRISTMAS TREE

ALBANY, GA.—The highest Christmas tree in Albany at Christmas 1959 grew out of phosphate rock dust at a fertilizer plant.

The tree, which was lighted for the first time this past Christmas, is actually an unidentified bush. It grows atop the 90-foot-high acidulating building of the Swift & Co. agricultural chemical division plant in Albany. Employees reported that the bush has been growing in an accumulation of phosphate rock dust for 12 to 15 years.

O. L. McDaniel, plant electrician, made the long climb to the top of the building and decorated the phosphate-grown tree with Christmas lights, which could be seen for blocks in that part of the city.

Fred A. Koechlein In New IMC Position

CHICAGO—International Minerals & Chemical Corp. has announced the appointment of Fred A. Koechlein as general credit manager of the corporation. Mr. Koechlein, who since July 1 had been manager of planning for the company's phosphate operations, has had 30 years of experience with IMC in the fields of sales production and purchasing. He will be responsible in his new post for administration of the company's credit policies. His career with IMC includes 16 years in top management of IMC phosphate mining and processing operations, including positions as general manager, assistant to the division vice president, and assistant sales manager. He was for several years located in the company's Florida offices.

Fred A. Koechlein

Outbreak of Pine Insect Pest in Washington State

PULLMAN, WASH.—A heavy outbreak of the pine resin midge, a native insect enemy of pine forests, occurred in 1959 in five Washington counties, David Brannon, WSU extension entomologist, has reported. Counties concerned are Ferry, Stevens, Pend Oreille, Spokane and Whitman.

Entomologists at the Missoula Forest Insect Laboratory say the outbreak is the heaviest in recent years but that damage to date is not great. Continued infestation over the next several years, however, could result in severe branch injury, growth loss, deformed trees, and some tree killing.

New Soil Conditioner

CLOVERDALE, CAL.—The Molalla Forest Products Co. has been formed in this northern California community to process and sell a new garden product soil conditioner under the name of "Golden Groom."

The product, processed from bark of logs, has been developed over the past six years by the Molalla Lumber Co., also of Cloverdale, and will be introduced to the trade during the spring. Distribution initially will be restricted to the San Francisco Bay Area and to selected intermountain markets.

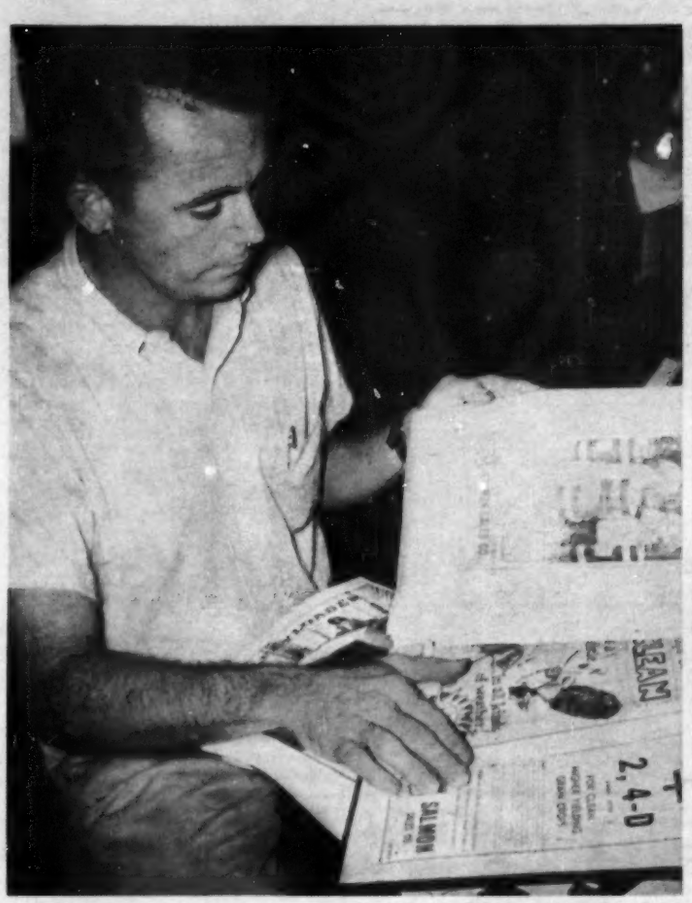
FORM CORPORATION

BOISE, IDAHO—Northwest Agrichemical Corp. has filed articles of incorporation, listing $5 million capitalization to engage in the manufacture of alcohol and other chemicals from agricultural products. Incorporators include Maxine J. McGee, Norma Gwilliam and Alice Jones, all of Boise.

SPECIAL MERCHANDISING SECTION

BETTER SELLING

MARKETING NEWS AND FEATURES



IMAGINATIVE advertising has won awards and customers for the Salmon Sales Co. Co-owner Farley Salmon looks over some prize winners.

How Large Is Your Bank Account of Customers?

By R. W. LANSFORD*
Marketing Specialist
University of Missouri

How large is your bank account of customers? Have you checked recently? Or could you check it? Are these customers the kind you know; the kind you speak to; or the kind you recognize? I congratulate you if these are the ones that you know because in knowing people you will understand how they think, what they want, and how they appreciate it.

You have the privilege of offering them the services that will help them grow in the community and will advertise you and your organization as one that you can put faith in and depend upon.

In this day and age, we normally say that there are three general categories of people that we deal with: those who know what they want and how to get it; those who know what they want but do not know how to get it; and those who do not know what they want and do not know how to get it.

This first category does not worry us very much because, in spite of the individual, these people will achieve their ultimate goal of getting a product or service.

The second group, of course, is not quite as fortunate because they do not know how to achieve this ultimate end toward which they are working. Somebody must interpret for them the values that they are looking for. If this is not interpreted through your organization, this individual must search out the answer in the community or away from that community since he does not make a decision for himself. How many of these people have you driven away from your place of business?

The third group is the one that appreciates and understands how they are being helped daily by good retail organizations. They are not sure of what they are looking for nor are they sure of what will benefit them. However, this group is always open to suggestions if the initiative is taken by the retailer. Here's where you with your initiative and your understanding of and appreciation for the customer can do the service that he would like. It is true that this creative selling job requires time to gain the information needed and to develop an appreciation for the product, but, most of all, a technique to disseminate the information to the customer in such a way that he thinks the product is worth more than the money he is spending. You may say that this is all well and good, but it does not necessarily apply to my field. If that is the case, may I ask what is your field and where is your territory?

(Turn to **BANK ACCOUNT**, page 16)

*The accompanying article is the text of a speech given by Mr. Lansford at a recent Missouri Fertilizer Sales Clinic.

ENLARGEMENT of the physical plant each year during the company's eight year life is the record of the Salmon Sales Co., Clarksdale, Miss.

Mississippi Partners Find . . .

Salesman Training, Imaginative Advertising Key Firm's Growth

By EMMETT E. ROBINSON and ED WHITE
Special Croplife Writers

A training program for salesmen coupled with imaginative advertising has helped a Clarksdale, Miss., farm supply firm increase its dollar volume 100 times in the past eight years.

Partners Farley Salmon and A. C. Abraham founded the Salmon Sales Co. eight years ago using a home dining room for an office. A year later the firm moved into a small office in Clarksdale and a year later to its present highway location about one mile from the city. Significantly, the firm has had to enlarge its physical plant every year since then.

Mr. Salmon and Mr. Abraham realized early in the game that outside salesmen would be indispensable in their firm's success. "You can't sell anything if you don't know it," Mr. Salmon says, "so we decided that each of our salesmen would have to be trained if he was going to do us or himself any good."

The training course consists presently of a loose leaf notebook about 1½ in. thick. It contains basic information on each of the products carried by the company—what it is, how to use it, what results can be expected from proper use, and the price. The fledgling salesman spends the first week or so in the office going through the book with either Mr. Salmon or Mr. Abraham. The next week or so is spent on the road with another salesman or one of the partners. After that, he's sufficiently up to date to begin calls on his own.

What does the company look for when hiring a salesman? Mr. Salmon puts it this way. "Of course we check all of the applicants for references, character, sobriety and so forth. Everyone does that. But there are two other things we look for particularly. The applicant must have a

(Turn to **ADVERTISING**, page 14)

You and Your Community

By Zenas H. Beers
Midwest Regional Director
National Plant Food Institute

A fertilizer dealer holds an important place in the community. As a vendor of a product that is inseparably linked with efficient, low cost production and good net agricultural income, many people believe that a dealer has an obligation to do more than just make a living selling fertilizer; that he should be a source of information on the efficient and profitable use of his product.

Fertilizer is important to profitable production and high net income. New crop varieties demand high fertility. Fertilizer is needed for high yields and high yields are linked tightly with low cost per unit and high profit per unit and per acre.

Efficient production is needed to; 1—hold old markets and 2—develop new markets.

Therefore, the agricultural welfare of a community is tightly tied to the use of plant nutrients for efficient crop production.

Customers indicate that they would like to be able to depend upon their fertilizer dealer to give them information on the need for fertilizer; on the methods of application; on the amount to use. The farmer of the future, with larger acreages to manage, with more complex problems to solve, is likely to be more of a decision maker, getting his information from people he can trust. The fertilizer dealer can be that respected source of information.

Fertilizer dealers are in unique position to provide that informa-

(Turn to **COMMUNITY**, page 10)

WHAT'S NEW
IN PRODUCTS · SERVICES · LITERATURE

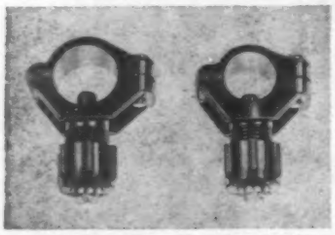
To obtain more information about items mentioned in this department simply: (1) Clip out the entire coupon in the lower corner of this page. (2) Circle the numbers of the items of which you want more information. Fill in the name and address portions. (3) Fold the coupon double with the return address portion on the outside and fasten the edges with a staple, cellophane tape or glue. (4) Drop in the mail box.

No. 6005—Sprayer, Duster Catalog

A 28-page illustrated catalog containing information about sprayers, dusters and allied products, has been released by Universal Metal Products Co., division of Air Control Products, Inc. The catalog contains information about operation of a number of company products, with specifications, illustrations and uses of each. For copies of the catalog, check No. 6005 on the coupon and mail to this publication.

No. 6003—Nylon Eyelets

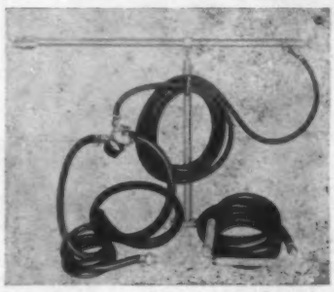
Delavan Manufacturing Co. announces that it has started making eyelets of nylon, because nylon offers resistance to corrosive effects of agricultural chemicals. According to company literature, the eyelets are simple to install on the boom and



have only one cap screw to tighten. A positive Hycar washer makes installation leakproof, the company says. They can be installed in production by drilling or punching an 11/32 in. hole in the boom. For more information, check No. 6003 on the coupon and mail.

No. 6004—Boomless Type Sprayer

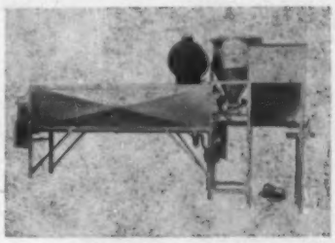
A boomless type sprayer (Model No. 630-L) that permits the operator to control each of its two jet nozzles independently from the tractor seat has been announced by Century Engineering Corp. The sprayer is equipped with a 44 in. aluminum gun on a swiveling, telescoping stand. The



driver can spray to one or both sides by turning the control handle. Extra nozzles are provided so the gun can be used for regular hand gun spraying purposes. For details, check No. 6004 on the coupon and mail.

No. 6002—Seed Treating Machine

A new version of the Kromer "Uniform Coat" seed treater, featuring sectionalized construction, has been announced by O. W. Kromer Co. The unit utilizes sectionalized construction for flexibility, economy and operating efficiency, the company says. The method consists of feeding a continuous stream of seed



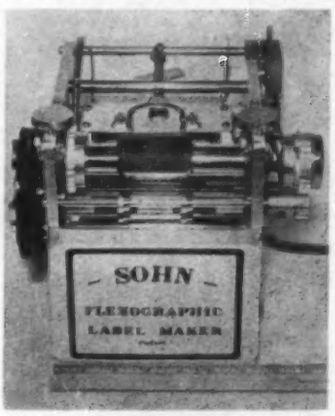
into a slowly revolving mixing chamber where the seed is sprayed. Then the seed passes through a cloud of chemical dust in the mixing chamber. As the seed is mixed, the dust adheres to the moistened seed. When the seed is coated all liquid is absorbed and the seed picks up no more dust. It is capable of processing up to 18 tons of seed per hour, the company says. For more information, check No. 6002 on the coupon and mail.

Also Available

The following items have appeared in previous issues of Croplife. They are reprinted to help keep dealers on the regional circulation plan informed of "What's New."

No. 6992—Label Maker

Sohn Manufacturing, Inc., announces a flexographic printing press which prints and diecuts on pressure sensitive label paper, or score cuts on gum, heat seal or plain paper.



Size is 9 in. by 9 in. by 9 in., without the guard case. Weight is 40 lb. It prints 6,000 labels an hour, and colors and printing plates can be changed in seconds, the company says. For further details, check No. 6992 on the coupon and mail.

No. 6999—Weed Killer Chart

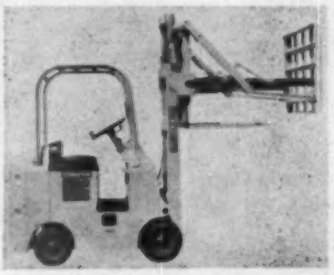
A wall chart which outlines recommended weed control methods has been published by Stauffer Chemical Co. Included are data on major crops, chemicals, application rates and weeds controlled. Sections are also allocated to the control of resistant weeds and brush along fence rows, ditches, roadsides and aerial application methods for treating sage brush, mesquite, shinnery oak, post oak and blackjack oak. For copies, check No. 6999 on the coupon and mail.

No. 6997—Centrifugal Pump Bulletin

An illustrated four-page case-history bulletin on the application of Thermaflow 100, reinforced polyester molding compound, in a centrifugal pump garden sprayer, has been released by Atlas Powder Co. Constructed principally from molded polyester parts, the pump is used in conjunction with a 10-gal. mobile sprayer for insecticides, liquid fertilizers and other sprays. Thermaflow 100 provides resistance to all types of chemical sprays, the company says. The pump has only one moving part, an impeller, which is coupled directly to output shaft of the engine. For more information, check No. 6997 on the coupon and mail.

No. 6000—Fork Lift Truck

Towmotor Corp. announces the Model 461 fork lift truck. The unit is equipped with a hydraulically-operated "Unloader Accessory" which the company says speeds up loading operations and the deposit of heavy loads in warehouses and storage areas by "pushing" the entire load from the



lift truck forks with one motion. The wheelbase is 46 in. Accessory does not interfere with the normal operation of the lift truck, the company says. For details, check No. 6000 on the coupon and mail.

No. 6001—Economy Sprayer Model

John Bean Division of Food Machinery and Chemical Corp. announces the economy Model 275 C.P. sprayer. Features of the unit include a four cylinder, 70 h.p. engine, convenient controls, a choice of two pumps, unitized frame and tank and specially designed nozzles, the company says. The unit equipped with the company's Royal 25 high pressure pump delivers 24.7 gpm at 400 psi. Equipped with a company self-priming, centrifugal pump it has a capacity of 50 gpm at 55 psi. It is designed for the small or medium sized orchard and can be equipped with a 300 or 400 gal. tank. For details, check No. 6001 on the coupon and mail.

No. 6994—Boron Guide

"Guide for Use of Boron Fertilizer" is the title of a publication made available by U.S. Borax & Chemical Corp. The guide is designed to be helpful in calculating the amount of fertilizer borate or "Solubor" equivalent to definite recommendations in terms of borax for many crops. For copies of the guide, check No. 6994 on the coupon and mail.

No. 6991—Electric-eye Manual

A 16-page booklet describing in detail miniaturized electric-eye applications for counting, sorting, monitoring, assembling and automatic weighing as applied to packaging, printing and general promotion, has been announced by Photomation, Inc. The equipment described in the manual ranges from direct or partial cut-off to reflector type units. It contains an expanded section dealing with specific in-plant installa-

Send me information on the items marked:

- ☐ No. 6991—Electric-Eye Manual
- ☐ No. 6992—Label Maker
- ☐ No. 6993—Drum Tiller
- ☐ No. 6994—Boron Guide
- ☐ No. 6995—Insect Control Booklet
- ☐ No. 6996—Pail Rack
- ☐ No. 6997—Centrifugal Pump Bulletin
- ☐ No. 6998—1960 Sprayer Line
- ☐ No. 6999—Weed Killer Chart
- ☐ No. 6000—Fork Lift Truck
- ☐ No. 6001—Economy Sprayer Model
- ☐ No. 6002—Seed Treating Machine
- ☐ No. 6003—Nylon Eyelets
- ☐ No. 6004—Boomless Type Sprayer
- ☐ No. 6005—Sprayer, Duster Catalog

(PLEASE PRINT OR TYPE)

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

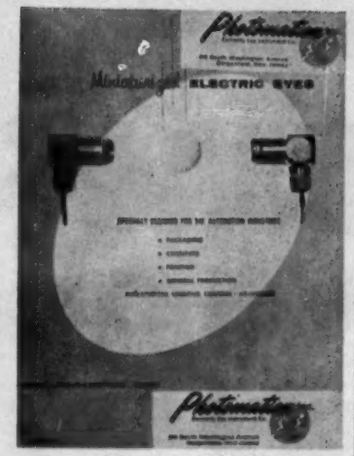
BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept. Minneapolis 40, Minn.



tions. Technical and specification data includes dimensions, circuitry, speed, monitoring and relays. For copies check No. 6991 on the coupon and mail.

No. 6995—Insect Control Booklet

A 10 page booklet entitled "Better Control of Insects in Stored Grains" has been published by Stauffer Chemical Co. Among subjects discussed are sanitation methods, grain protectants and fumigants. A feature is a wall chart which includes identifying sketches of principal stored grain insects. For copies of the booklet and chart, check No. 6995 on the coupon and mail.

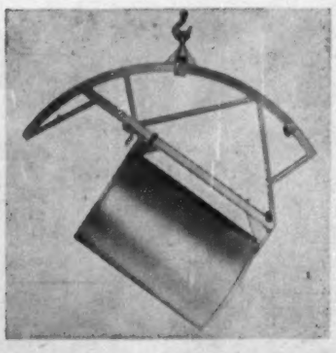
No. 6996—Pail Rack

Hub States Chemical & Equipment Co. announces a method of dispensing liquids from 5 gal. containers. Called the "Pour-Easy" pail rack, the unit provides a means of dispensing from this size container. The balanced container eliminates waste by spilling, the company says. Clamping of the

band is performed by tightening a plated wingnut. For details, check No. 6996 on the coupon and mail to this publication.

No. 6993—Drum Tilter

Pucel Enterprises, Inc., announces the "Grizzly Roto-Tilt" for lifting and tilting steel and fiber drums for pouring and dumping powders, granules, chemicals and other materials. It is a one-man operation, the company says, and can be used with fork truck, chain falls, chains and hoists.



Works on old and new steel and fiber drums, containers, barrels and boxes, closed or open, battered or lopsided, the company says. It weighs 60 to 80 lb., depending on the model, and has a lifting trolley with ball bearings, safety locking bracket with serrated jaws for attachment on top rim of drum, and a recessed foot plate to hold drum bottom. For more information, check No. 6993 on the coupon and mail.

No. 6998—1960 Sprayer Line

Hahn, Inc., announces nine Hi-Boy self-propelled, high-clearance sprayer models for its 1960 line. The units are designed for application of liquid fertilizers, for weed control and for spraying of crops through every stage of growth, the company says. All machines feature rustproof aluminized-steel tanks and booms. Improvements in the model illustrated (H-300) include boosting the horsepower to 30 and the maximum speed to 20 m.p.h. The company also increased the tank capacity to 200 gal. More details can be secured by checking No. 6998 on the coupon and mailing to this publication.

COMMUNITY

(Continued from page 9)

tion. They have twice the contact with their customers than the next most influential group. They have the opportunity to provide information quickly, accurately, and relate it more directly to the customers' needs than most anyone else in the community.

With rapid changes in agriculture, economic well being of the community and of the individual farmer depend on his knowledge of the new developments and his ability to screen those which have value and adapt them to his farming operation.

The speed with which these new developments are adopted and benefit the farmers of a community in fertilizer use will be slower if the fertilizer dealer does not serve as a source of trusted information. Farmers will turn to other sources but the process will be slowed and the ability to compete in a fast changing agriculture will be lessened.

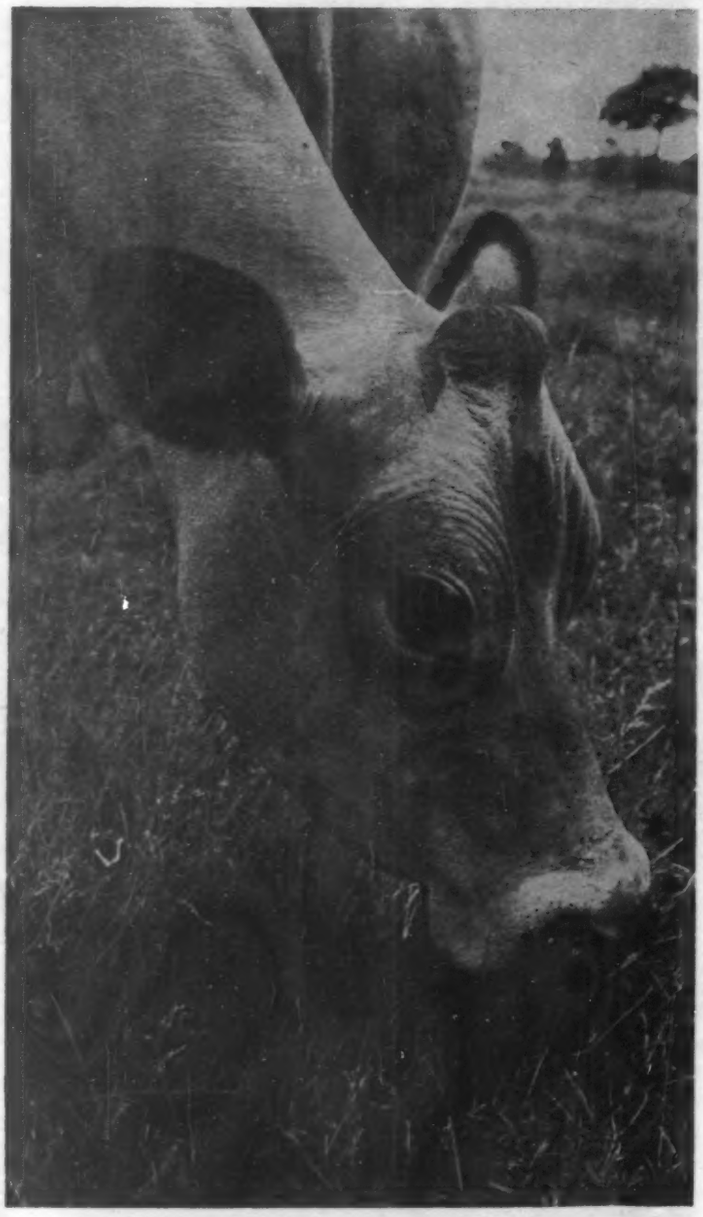
A fertilizer dealer who believes that he does not make money from fertilizer might well be able to spend the time to be informed on fertilizer so that his customers and his community can be more prosperous, be a better place for business and a better place to live.

Even though a dealer might not be repaid in profit from fertilizer sales, his customers could well be enough more prosperous so that the dealer's "money making" enterprises would flourish.

5 POTASH PRODUCERS HELPING DEVELOP

NEW POTENTIALS

through the activities of the



ON FORAGES—Only a fraction of America's forage crops get any fertilizer at all. Even though more than half the total land area of the United States (about 1 billion acres) is in pasture and grazing lands. Virtually none is fertilized adequately. Even though plant food on pasture pays. On hay, too. Farmers will start using fertilizer only when someone convinces them, proves it will be to their advantage. Potash Institute agronomists are working at it side by side with USDA and college agronomists coast to coast.

ON FORESTS—A new field for plant food use. Still in its early stages of development, forest fertilization shows promise of becoming a standard practice, requiring many thousands of tons of plant food. Potash producers have pioneered in the study and development of this new potential. Potash Institute agronomists have traveled at home and abroad gathering firsthand information for the fertilizer industry

ON LAWNS—All over America, suburban developments with new homes and new lawns sprawl cross-country. This is prime fertilizer sales territory! And it's growing. Five Potash producers, through their Institute, are helping translate this growth into plant food sales. A special Institute handbook on lawn fertilization was recently published. Requests for it average over 1,000 a week.

K_2O

● AMERICAN POTASH & CHEMICAL CORPORATION ● DUVAL

● POTASH COMPANY OF AMERICA ● SOUTHWEST P

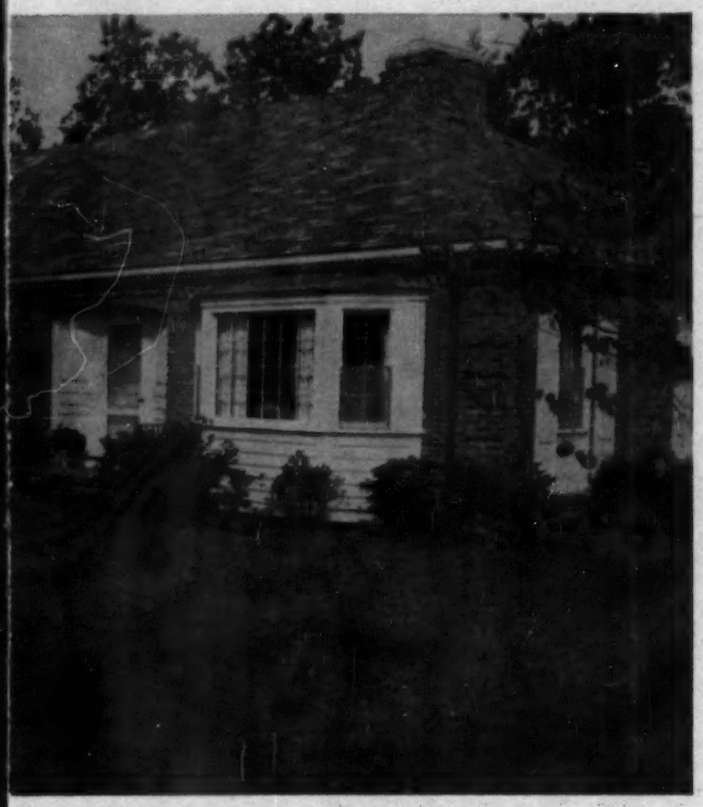
● UNITED STATES BORAX & CHEMICAL COR

Working through THE AMERICAN POTASH INSTITUTE, INC., 1102 Sixteenth

for PLANT FOOD

American Potash Institute

ON ROADSIDES—Highway right-of-way fences now enclose thousands of acres of former farm land. And the surveyors' transits are trained on thousands more. This land is lost to farming. **But it's not lost to the fertilizer industry—IF we do something about it.** A suggested standard of 100 pounds each of N, P_2O_5, and K_2O has been set for each acre of this vast public domain. This standard has been set by The American Road Builders Association Subcommittee on Fertilization and Mulches. A Potash Institute agronomist serves as a member of this subcommittee.



ON GRAIN—A half-realized potential. On the average, even corn receives little more than half the plant food it could profitably use. Small grain, sorghums, soybeans, likewise. More and more farm land is moving into the hands of larger-scale farm operations. They can be sold on higher-level fertilization. Significance? A huge plant food potential, right in the very area already serviced by existing mixing plant and dealer organizations. Potash Institute agronomists coast to coast are helping build this concept of optimum fertilization.

YOU ARE INVITED to make use of the services of The American Potash Institute

SIMPLY MAIL THIS COUPON

THE AMERICAN POTASH INSTITUTE, INC.
1102 Sixteenth Street, N.W., Washington 6, D. C., Department 152

Please send me information on the topics checked below:

- ☐ Wall Posters
- ☐ Reprints of Soil Fertility Articles
- ☐ Lawn Handbook
- ☐ Slide Sets
- ☐ Special Garden Book
- ☐ Regional News Letters
- ☐ Bi-Monthly Magazine "Better Crops"
- ☐ Folders

Name_____

Address_____

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SULPHUR & POTASH COMPANY

POTASH CORPORATION

PORATION

Street, N. W., Washington 6, D. C.

FARM SERVICE DATA

EXTENSION SERVICE REPORTS

Trying to produce good crop yields on low fertility soil is like attempting a long motor trip on flat tires reports the National Plant Food Institute's Midwest division, in citing a statement by Kentucky agronomists.

"Careful car owners check their tires before starting on a trip," say B. N. Driskell and Harold F. Miller, University of Kentucky extension soils specialists. "Careful farmers should check their soils before starting on a crop growing operation."

Soil tests are profit builders, the Kentucky specialists point out. Such tests give the farmer information about the nutrients his soil needs to produce high-income, low-cost crop yields.

The NPFI reports that crop yields are 40% higher among Midwestern farmers who have their soil tested and follow fertilizer recommendations of college agronomists.

"The first step in getting accurate soil tests is to do a good job of taking soil samples from the field," says NPFI. "Tests can be no better than the way the samples are collected.

"Farmers can get complete directions for collecting soil samples from their county agricultural extension agents. By having your soil tested this fall you can make your fertilizer dollars do a better money-making job for you next year."

★

The trend toward larger farms and increased management efficiency will encourage greater use of fertilizer in the years ahead, reports the Midwest division of the National Plant Food Institute.

The NPFI quotes Dr. Elmer Kiehl, chairman of the University of Missouri's agricultural economics department to the effect that as time goes by, "farmers will consider fertilizer as a means to reduce unit costs of crops produced, and less of a total expense of the farming business."

"As unit costs of crop production go down, by the use of fertilizer, net profits go up," says NPFI. "Research at midwestern agricultural colleges indicates that many farmers could at least double their present income per acre by using the right kinds and amounts of plant food."

Farmers today are getting more crop growing power from every ton of fertilizer, NPFI says. In recent years the plant nutrient content of mixed fertilizer has increased from 28.18 to 38.86% in seven midwestern states. And in five other Corn Belt states, it has risen from 26.68 to 36.22%.

"As fertilizer's crop building power has risen, the price has remained relatively steady," NPFI says. "Economists report that plant food prices have increased less than those of virtually any other item used in crop production.

★

Fungicide sprays to which had been added antibiotics such as streptomycin and agrimycin gave much longer protection to broccoli plants against the inroads of downy mildew, a major disease of that crop, than the fungicides used alone in experiments at Cornell's New York State Experiment Station at Geneva.

The use of antibiotic sprays on broccoli has not yet been authorized by the Food and Drug Administration, and is not recommended at this time, say the Cornell scientists. But the results of these drugs indicate the possible value of systemic control of plant diseases by some antibiotics.

"Downy mildew is an important disease of broccoli and other cruciferous crops in many areas of the U.S., with the only control at the present time being the application of protective foliar fungicides," explains Dr. John J. Natti, station plant pathologist.

"Control with fungicides has not been as effective as desired," he continues, "mainly because of inadequate coverage of the foliage during rainy periods. Because rainy conditions are favorable for the spread and germination of downy mildew spores and the rains also wash away spray deposits from the broccoli leaves, the times at which control is most necessary are also the times when the plants have the least protection."

For effective control of downy mildew on broccoli, therefore, a fungicide must either be retained in effective concentration on the foliage during rains or must be absorbed by the leaves so that it is not subject to weathering, says Dr. Natti.

In the station tests, a combination of copper-zinc plus streptomycin, although only slightly more effective than the copper-zinc alone at the time of application, was far more effective 21 days after the final spray application. Also, the incidence of broccoli heads infected with downy mildew was less in the plots sprayed prior to the development of the heads than in plots sprayed only during the period of head development.

★

Apples need ample potash to make them red, says Dr. James Beattie, Ohio Agricultural Experiment Station horticulturist. Dr. Beattie has discovered that a lack of this nutrient in the orchard results in poorly colored fruit.

For best color in apples, the level of potassium in the leaves should be well above 1%, but ideally closer to 2%.

It is best to apply extra potassium to the soil, research shows. This method results in better color, higher yields and greater shoot growth than when potassium is sprayed on the leaves. In tests either method was better than no supplementary potassium as witness these yields: 73 lb. of apples from trees receiving soil potassium; 58 lb. from foliage-sprayed trees; 39 lb. from check trees.

Yield increases such as these from using additional potash would usually not be realized on orchard sites already well stocked with this mineral, Dr. Beattie maintains.

ADVERTISING

(Continued from page 9)

'selling personality' because if you can't sell yourself you sure can't sell a product. The second thing we like to find in a future salesman is a good agricultural background and preferably a degree from an agricultural school."

The company keeps three salesmen on the road during the work week and Mr. Salmon and Mr. Abraham spend as much time on the farm as their office duties will allow. Use of the salesman's book isn't limited to the salesmen alone. "We keep a copy handy for the bookkeeper and our secretary," Mr. Salmon explained. "If someone calls for information and the rest of us are tied up the customer can still find out what he wants without calling back."

The loose-leaf notebook was compiled by the two partners and is continually updated as new products are taken on and new research information becomes available.

Salmon Sales Co. backs its thorough salesmanship with a highly flexible advertising program that always seeks a fresh approach. The firm uses a combination of newspaper, radio and direct mail advertising to give its products the proper support. Much of this effort is financed in cooperation with feed, insecticide and fertilizer companies.

The newspaper advertising is channeled through an advertising agency which prepares copy and layout under the supervision of either Mr. Salmon or Mr. Abraham. Some of this advertising is in cartoon form and much of it has evolved into informal or semi-comic ads.

"What we are trying to do is get away from the stereotyped ads so many farm supply houses run and to get the reader's attention right away," they say. Apparently the young firm is doing just that and several of its ads have won commendation in advertising competitions. The company prefers to place its ads in the local daily newspaper's farm page.

"Our radio advertising is limited to spot schedules on the local station," Mr. Salmon said. "We use lots of them when a particular product is hot. We co-op these with national advertisers but we reserve the right, and often do, to change the copy to fit our own particular needs."

The company does the usual direct mail advertising and goes a bit further than many farm supply firms. When a new agricultural chemical line is taken on, Salmon Sales Co. draws up a mailing piece telling their customers about it. This not only helps the farmers keep up to date on better products at their disposal but shows them that Salmon Sales is keeping up to date, too.

Billboard advertising comes in for its share of attention. This year the company has 15 boards, most of them in cooperation with manufacturers of farm supply products.

Mr. Salmon points out that servicing the customer is all-important to a prosperous agricultural chemical business. "If we had to sum up our business philosophy in one word it would be 'service' without exception," Mr. Salmon said. "This business is a hot box of competition. When you get right down to it, most of us are selling the same products. But the man who takes care of the customer is the one who will come out on top."

The company offers the usual on-the-farm delivery service and prides itself on getting the product to the farmer when he wants it. Staff members are always ready to go out and check the farmer's crops with him and to supply management help.

"When a customer comes up with a question we can't answer, we find out for him," Mr. Salmon reported. "We are only a few miles from the U.S. Experiment Station at Stoneville and we can usually get any kind of information or help we need in a short time."

This year the company took on a new product, liquid nitrogen in the form of Uran. The partners are enthusiastic about the possibilities of this product. Said Mr. Salmon, "We think that liquid nitrogen will become supreme in this area in the near future." Backing this judgement the company put in a 165,000 gal. tank and plant.

With a large stake in farmer acceptance of this new product, the partners decided to go a step further. They purchased 22 application rigs and made them available to their customers on a rental basis. New operators are carefully trained and instructed. "We won't let a rig start unless one of our men is there," Mr. Salmon commented. "With a new product like this, we want to be sure that the application job is done right so the farmer will get the results he should. If he's happy, he'll be back."

The company serves farmers within a 30 mile radius of Clarksdale in the northern Mississippi Delta.

The salesroom-warehouse combination contains almost 7,000 sq. ft. There is plenty of space in the graveled parking area surrounding the metal building. A loading dock entrance to the warehouse materially speeds pickup and delivery.

Store hours? "We're open as long as anyone wants to do business with us," grinned bookkeeper Lloyd Williams. "Six to six would be a good average, though." The firm employs 10 persons throughout the year picking up additional help as required during the rush seasons. Incidentally, five of the six men on the office and sales staff are college graduates. Mr. Salmon was a star football quarterback at the University of Mississippi several years ago.

As the business grew in volume and complexity the partners decided to divide the responsibility. Mr. Salmon takes care of the agricultural chemical responsibilities with Mr. Abraham assuming control of the other lines.

Thinking back eight years to the time when the company first went into business, Mr. Salmon grinned and recalled: "One day a farmer called in and placed an order for $450. It was the largest one we had had up to that time and we felt so good we took the rest of the day off and played golf. The next day the farmer called back and cancelled the order. We've been a little more conservative about such things since then."

He paused and rubbed his finger reflectively over a motto under the glass covering his desk. It read: "Am I doing the job the way it ought to be done? Or am I taking it easy on myself?"

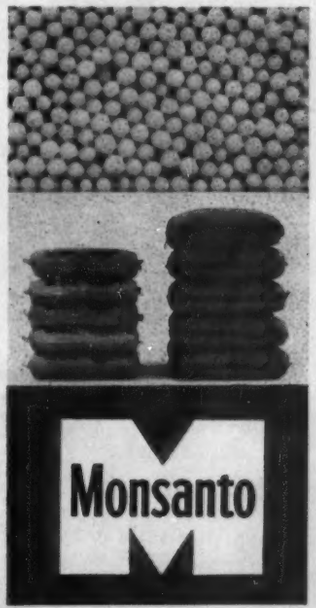
Getting ready for a big Spring...

That large shaggy fellow having his picture taken isn't the only one bunching his muscles for a big spring. Those Monsanto men are doing the same thing... putting a lot of "muscle" into a big spring advertising program for LION® E-2 Ammonium Nitrate.

This year, the farmers in your county are going to "focus in" on LION E-2. They're going to *hear* Lion, *see* Lion, and talk about Lion. And, with a little nudging from you, they're going to *buy* Lion E-2.

If you're a sharp-eyed businessman who wants to profit from a "lion's share" of ammonium nitrate sales, let us help you get ready for a big spring with Lion E-2. Write LION E-2, Monsanto Chemical Company, St. Louis 66, Missouri.

LION: Reg. T. M.



Why LION E-2 is the deal for dealers:

Lion E-2 is the only ammonium nitrate on the market that can save 20 to 25% of your valuable storage space. Because each Lion E-2 prill contains less air space, you can stack *five* 80-lb. bags of Lion E-2 in the same space previously taken up by just *four* 80-lb. bags of any other brand. (Lion E-2 is a good deal for your customers, too. Because of E-2's super density, farmers can eliminate one out of every five refill stops.)

OSCAR & PAT

Henrietta Backhuber was a shirt tail cousin of Minnie Schoenfeld and they had often visited each other when children. And so it was quite natural that when August Backhuber, her husband, a fireman, got his vacation each year in the California town in which they lived that Henrietta should suggest that they drive east and spend a day or two or more with the Schoenfelds. She and Minnie would have so much to talk about; they had been such good friends, and even now wrote letters to each other.

Minnie had never actually invited Henrietta and August to visit them in their Iowa home, and with good reason. Oscar had told her to sidetrack all her relatives on this visit business; they stayed too long, ate too much and bragged too much about their homes and cars, which was not to his liking. Oscar did not like people who spent money; especially those who spent more than they earned.

But this year, Henrietta and August had taken the bull by the horns. They planned a trip east for three weeks, and dropped Minnie Schoenfeld a note the day they left California.

"They say they will just drop in and say hello," Minnie explained to an irate Oscar when he came home for lunch one day and heard about the letter.

"That's what they say!" Oscar snapped. "Get rid of them as soon as you can, Minnie. Don't get them much to eat. Don't tell them we haf dandelion wine in the cellar. Don't open any preserves, or jelly or canned chicken. Ach, and I will talk about high prices and inflation and how hardt times may be. If that doesn't scare them off, we'll tell them how busy we are and don't have time to entertain."

"Oh, Oscar, she is my friend!" Minnie pleaded. "We had such good times together once."

"Well, she is not goink to have more good times with you at my expense. Somebody has to put his foot down on the spongers and the spendters, and I am the one who can do it when they come to my house."

Thus was the law laid down and Minnie knew it.

The years had been good to Henrietta and August Backhuber. They were both plump and laughed heartily. They were very social, and Oscar kenw he was in for trouble. Being plump, they would eat a great deal; being social they would stay not only a day but a week or more if they got the slightest encouragement.

"Glad to know you, Oscar," bubbled August, vigorously shaking Oscar's hand. "I hope we can be good friends. How is your business?"

"Terrible," Oscar said. "I've got a partner who is one of those crazy Irish spendters. He sells more than he can collect for. I haf to figure tight and holdt him down—when I can. But we are safers, Minnie and me. We are not chargers. We pay cash. And we don't buy anything we don't need."

"Oh, I see," said August knowingly, as a door of understanding swung open to him.

They sat down to a meager lunch of cheese on rye sandwiches, warmed over beans and weak coffee. Plump Henrietta and August seemed a little depressed at sight of the lunch, but they ate dutifully. During the brief meal, Oscar kept scolding the present generation of spenders and nonsavers, until Henrietta and August could not help getting the idea that he was a little tight when it came to money.

"I know you are tired after your long drive from Des Moines," Minnie said at nine o'clock. "I'll show you to your bedroom. The car is all right in our drive. Oscar always walks to work—to save the gas."

The bedroom which they were to occupy was on the second floor. It had an old iron bed, and quite a few old dressers and chairs were stored in the room, making it quite crowded.

"Did you say Oscar was in business?" August whispered to Henrietta as they undressed. "Who in the world would ever want to come to a store and buy from a sour puss like him?"

"He has an Irish partner named Pat," whispered Henrietta. "Minnie wrote me about that. Oscar and Pat are always fighting."

"Oh, that's the answer. The Irish partner jollies up people, makes them feel important. Sorta offsets Oscar's miserliness."

They got into the iron bed and tae spring creaked loudly and the mattress sagged. "Gosh, what a bed," August groaned. "This thing isn't going to help my back."

"Lumpy pillows!" Henrietta mumbled as she settled herself. "Ouch, am I lying on a hardboard?"

"Not me," grumbled August. "My side sags and creaks. They ought to be ashamed—"

"I'm going to look under the mattress," Henrietta said. She got up, switched on the light. With August's help she lifted the mattress.

Two boards about five feet long were on Henrietta's side of the mattress. She lifted one and saw jagged ends of coil springs sticking up.

"Don't take them out," August warned, "If you do you and the mattress will sink right through to the floor."

Henrietta moved the second board and two books banged to the floor.

"Well, for Heavens—. Maybe we could put the mattress on the floor and sleep on it. That would be better than this spring."

"There's no room, Henrietta. Those dressers and chairs are in the way. We'll just have to sleep in the bed the way it is—if we can sleep. If there was a motel in this town, I'd be in favor of taking our grip and sneaking out—right now."

The next morning a weary, red eyed, yawning Henrietta and August came downstairs, even before Oscar got up. Minnie was just cooking oatmeal.

"Oh, you're up early," she said.

"We want to get an early start," August explained. "We want to get to Chicago and take in the sights."

After a meager breakfast and some quick handshakes, Henrietta and August drove away. Oscar was just getting up.

On the highway, August said to Henrietta, "Let's stop at the first good motel, take a room and sleep all day!" he growled. "Childhood friend! Wow!"

BANK ACCOUNT

(Continued from page 9)

Are your sales made only in the store, or are you subconsciously making sales and creating good will by the instore and outstore relationships that you build with the community? If this is the case, then the creative selling that you are doing will take place constantly. Creative selling for the benefit of the customer should become as natural for you as eating if you get your feeling of importance out of life by helping others. If, of course, the value of life to you is the dollar signs on your glasses, then you have ceased to be, or never were, a creative salesman.

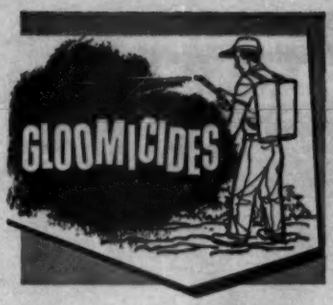
We are conscious, I am sure, that most people buy a product because it gives them a feeling of personal worth, or it improves their livelihood, or it offers variety from the things they have been used to. Since you are in constant contact with manufacturers and distributors, as well as consumers, you have more opportunity to know the value attached to and the reason why most people would be interested in your product or services. Therefore, you can tell a more complete story in the relationship of wants and needs and on the level than any other person.

We must recognize also that the number of people we serve gives us a further reason to tell a complete story once an idea about a product has been instilled in the minds of the customers. That is, if a new kind of fertilizer or plant nutrition is developed and you, the retailer, can entice one or more of your customers to try it, the initial sale is only the beginning. What a customer says and does during the period from the time the product is used until the harvesting takes place allows for constant and constructive communication between you, the user, and the other members of the community. This means that, as a leader, you are continuing to give out each chapter of this product result until the final chapter is written and statistics show the results.

If you fail to advertise through the natural selling opportunities, this experiment will be useless to you because the additional sales, as well as repeat sales, will not be made as a result of the lack of creation in the minds of customers of a need for this product.

I challenge you as the leaders of your communities to develop a love for your customers and an interest in your business to the extent that your community appreciates you more and your profits increase to the extent that the bank account of money ceases to be a problem and the bank account of customers is continually growing. In this day and age, where it is easy to sluff off our duties and privileges and follow as everyone else does the momentum that carries us into the position where we are because of nature and not because of leadership.

I dare you to be different. Do something that is constructive, interesting and valuable to your customers. If you let selling come naturally as it should do, your appreciation for people, your products, and your community will grow. The enthusiasm that you show is catching. I wonder how long you will let it show.



The two men had been standing at the bar for quite a while. "Hank," said one to his friend, "does your tongue burn after you drink a lot?"

Hank pondered the question. "Don't know," he replied thickly. "I've never been drunk enough to light it."

★

"But, Matilda," pleaded the unhappy swain, "why won't you marry me? There isn't somebody else, is there?"

The lass looked at his homely visage, at the ears that flapped incongruously, and at the expression on his face. "Oh, Clarence," she wailed, "there must be!"

★

A Georgia farmer put this sign in front of his watermelon patch:

One watermelon in this patch has been poisoned.

Next morning the sign had been changed to read:

Two watermelons in this patch have been poisoned.

★

The class assignment was to illustrate the song, "America, the Beautiful."

On looking over Johnny's illustration, the teacher recognized the flag, the map, the purple mountains, even the idea of the "sea to shining sea." But she was stumped by an airplane in one corner, covered with red and yellow balls.

"What's this supposed to represent?" she asked.

"That," Johnny said proudly, "is the fruited plane."

★

The codfish lays ten thousand eggs,
The homely hen lays one.
But the codfish never cackles
To tell you what she's done.
And so we scorn the codfish,
While the humble hen we prize,
Which simply goes to show you,
That it pays to advertise.

★

The Texas rancher, visiting Australia, was being shown around the largest farm in New South Wales.

"Why this would fit in one corner of my ranch back in Texas," he said.

When his friend pointed to a herd of 10,000 cattle, the Texan said, "Purty, but they'd get lost among my herd."

Just then a kangaroo leaped over them and the Texan, startled, asked: "What in tarnation is that?"

Whereupon the Australian said: "You mean you don't have grasshoppers in Texas?"

★

A frightened householder reported to the police that he'd been struck down in the dark outside his back door by an unknown assailant. A young policeman was sent to investigate and soon returned to headquarters with a lump on his forehead and a glum look on his face.

"I solved the case," he muttered.

"Amazingly fast work," his superior complimented him. "How did you accomplish it?"

The young cop explained, "I stepped on the rake, too."

New Hampshire Sets Guarantee Conference

CONCORD, N.H.—An important industry-wide conference on fertilizer formula guarantees, violations of tolerances, application of triple penalty provision of the state's fertilizer law, and the need for more careful mixing and handling of fertilizers to avoid violations, will be held here Jan. 19, it has been announced.

The decision was made by Perley I. Fitts, commissioner of agriculture, following a conference with the full membership of his agricultural advisory board, members and executives of the New Hampshire unit of the Agricultural Stabilization Conservation Administration, and others.

The conference will be open to spokesmen for fertilizer manufacturers and distributors, heads of farm organizations, representatives of state institutions and other such fertilizer buyers, farmers and others with a real interest in better enforcement of the New Hampshire law that protects ultimate buyers of fertilizer against mixtures below registered formulas, after tolerances.

Mr. Fitts said the conference would mark the beginning of a determined drive to see if his department can reduce the many violations of the fertilizer law and eliminate the need for assessing so much on the triple penalty clause of the law.

Annual Alabama Fertilizer Sales Report

MONTGOMERY, ALA.—Sales of fertilizer in Alabama during the year ending June 30, 1959, amounted to 1,045,562 tons, reported R. C. (Red) Bamberg, commissioner, Alabama State Department of Agriculture.

Most popular mixtures were 4-10-7, with 268,313 tons sold, and 4-12-12, with 251,078 tons sold. Most popular material was nitrate of soda, with 75,338 tons sold.

California Pesticide Review Scheduled

DAVIS, CAL.—A new pesticide review for northern California sponsored jointly by the Western Agricultural Chemicals Assn. and the Entomology Club of Northern California, will be held in the Recreation Hall, University of California at Davis, Feb. 4. Nearly 600 attended the Review for Central California at Fresno Fairgrounds last September.

Pesticide salesmen, farmers and others will hear the latest information about use of the newer pesticides on crops grown in Northern California.

SOUTH CAROLINA SALES

CLEMSON, S.C.—Fertilizer sales in South Carolina during November, 1959, amounted to 23,140 tons, compared with 22,096 tons for the same month a year ago, reported B. D. Cloaninger, director, fertilizer inspection and analysis, Clemson College.

T. F. Fricke E. G. Ward

Carbide Chemicals Co. Expands Field Sales Force

NEW YORK — Two transfers of Crag Agricultural Chemicals sales representatives from company headquarters in New York City to marketing areas in the field have been announced by Union Carbide Chemicals Co., Division of Union Carbide Corp.

The new assignments are part of a field sales force expansion program planned for the 1960 pesticide season, the company said.

Eugene G. Ward has been transferred to Jackson, Miss. Under supervision of J. R. Wheatley, Southern regional sales manager, Memphis, Mr. Ward will concentrate on sales of Sevin insecticide throughout the Delta.

T. F. Fricke, with headquarters at Madison, Wis., will help develop sales for Sevin and Glyodin fungicide for use on fruit. He will be supervised by T. P. Finn, Eastern regional sales manager, Rockland, Mich.

Mr. Ward holds a bachelor of science degree in agriculture from Oklahoma State University. Mr. Fricke graduated from Cornell, and also has an agricultural bachelor of science degree. Both men have been members of the Crag Agricultural Chemicals marketing staff in New York City, working in the Sevin product group.

Henry F. Pierce Promoted by Hercules

WILMINGTON—Hercules Powder Company has announced that Henry F. Pierce has been appointed assistant sales manager of its Naval Stores Department's Agricultural Chemicals Division. Mr. Pierce has been senior technical representative of the division since October, 1956. The appointment, effective immediately, was announced by Richard T. Yates, director of sales for the company's Naval Stores Department.

A native of Spring Lake, New Jersey, Mr. Pierce is a graduate of Pennsylvania State University, where he received his B.S. in zoology and entomology, and Rutgers University, where he received his M.S. degree in entomology.

He joined Hercules in 1951 as a technical sales representative with the Naval Stores Department in Wilmington. He was transferred to San Francisco in 1952, and later to the company's office in Los Angeles as senior technical sales representative, before returning to Wilmington in 1956.

February Chemical Meeting Scheduled

LUBBOCK, TEXAS—The seventh annual Agricultural Chemicals Conference will be held on the campus of Texas Technological College here Feb. 9.

The emphasis of this year's program is "Quality in Production," and the program will feature research and industry speakers discussing methods and problems in fertilizer, insecticide and herbicide use in the Southwest.

The conference is co-sponsored by Texas Technological College, Texas A.&M. College and the West Texas Chamber of Commerce.

Niagara Forms New Market Research Department

MIDDLEPORT, N.Y. — Formation of a new marketing research department and the appointment of J. Lloyd Poland as its manager has been announced by Niagara Chemical Division, Food Machinery and Chemical Corp. At the same time, Ralph Freund was named a market analyst for the new department.

Until now, Niagara's market research function has operated as part of the research and development department, and has been chiefly concerned with technical development projects. The new department will continue to work in this area, but will broaden its services to include market studies for other departments in the company as well.

Mr. Poland will coordinate its activities and be responsible for the planning and carrying out of all projects. Prior to his new appointment he conducted market research programs for the research and development department for six years. He joined Niagara in 1948, working until 1953 on product development—technical biological research.

Mr. Freund joined Niagara in November. As a market analyst in the new department, he will be concerned with evaluation of demand for new pesticides, the potential of new markets, etc. He was graduated from Colorado State University in 1957 with a BS degree in agricultural economics.

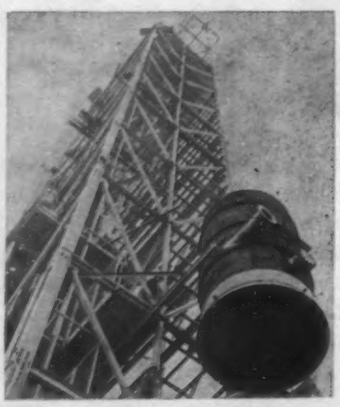
Systemics Control Warble Flies in Canada

WINNIPEG — Fall treatment of warbles in beef cattle using recently developed systemic insecticides may soon replace the traditional spring application of derris powder. This view is held by livestock men and entomologists in western Canada.

Experiments carried out on farms in Manitoba last winter confirm that the systemics give a high degree of grub control. According to a report by D. R. Robertson, Manitoba provincial entomologist, 76 calves and 19 yearlings sprayed with a .5% solution showed 99% control. None of the animals showed any ill effects from the treatment.

Given orally in a bolus capsule form to 14 calves, the systemic resulted in excellent control of warbles. Each of [illegible] treated calves gained an average [illegible]over 20 lb. more than untreated calves.

Cost of treatment with either method ranges from 75¢ to $2, depending upon the size of the animal, Mr. Robertson said.



PLANT NEARS COMPLETION—A vacuum separator is hoisted 180 ft. to the top of the prill tower at SunOlin's urea plant now under contruction at North Claymont, Del. Urea pellets are formulated in the prill tower. The plant, 70% completed, will go into production early in 1960. The urea will be used in resins for the chemical industry and as a high nitrogen fertilizer and a feed supplement. SunOlin is a joint venture of Sun Oil Co. and Olin Mathieson Chemical Corp.

UNPOPULARITY WINNERS

SALEM, ORE.—Codling moths and cattle grubs hold top places again in 1959 in the listings of the most undesirable pests present in Oregon, the State Department of Agriculture reports. But some new ones appear in the 10 "most important" pests picked in two categories.

Newcomers to the pests of crop and forest are bark beetles, black pollen beetle, gray garden slug and corn earworm. Holdovers are the pear psylla, western cherry fruit fly, aphids, the garden symphylid and spruce budworm.

The annual selection of the ten most important pests of man, animals and household includes, besides cattle grubs; horn flies, cattle lice, mosquitoes, carpet beetles, termites, earwigs, sheep ked, houseflies and roaches. Only horn flies are new on this list.

Hercules Appoints Donald F. Stauffer to New Canadian Post

WILMINGTON, DEL. — Appointment of Donald F. Stauffer to be in charge of Hercules Powder Company's naval stores department technical service and development work in Canada was announced here by Richard T. Yates, the department's director of sales.

The newly created position was made in view of the rapidly growing industrial markets in Canada, and correspondingly increasing requirements for technical assistance, Mr. Yates said.

Mr. Stauffer will be devoting his full time to the duties of the new position, and will function as the coordinator between all divisions of the naval stores department and Canadian customers and distributors. He will also handle technical problems involving naval stores products in Canada.

A graduate of Ohio State with a B.S. degree in chemical engineering, Mr. Stauffer also holds a M.S. degree in chemical engineering from Princeton. He joined Hercules in 1950.

Aubrey E. Sherman Joins Amchem Products

AMBLER, PA. — Aubrey E. Sherman, former district agriculturist in the province of Alberta, Canada, has joined Amchem Products here as a sales representative in Alberta, Saskatchewan and Manitoba. Mr. Sherman, who lives in Lethbridge, Alberta, with his wife and two children, will work closely with the United Grain Growers Ltd. and the extension and regulatory agencies in the Prairie Provinces of Canada in the interest of developing better weed control through use of chemical weed killers.

Aubrey E. Sherman

Mr. Sherman graduated in 1950 from the University of Alberta with a B.S. in agriculture and for the three years following was an instructor and lecturer on farming in an agricultural school in South Dakota.

Ohio Fertilizer Meetings

COLUMBUS, OHIO — Ohio State University has announced a series of Ohio regional fertilizer and lime conferences.

The dates and places include: Jan. 14, Masonic Building, Ravenna; Jan. 18, Methodist Church, Caldwell; Jan. 19, 4-H Building, fairgrounds, Cadiz; Jan. 20, YWCA Building, Zanesville; Jan. 21, Methodist Church, Jackson; Jan. 26, Elks Building, Findlay; Jan. 27, Grange Building, New London, and March 1, American Legion Building, Lebanon.

Smith-Douglass Names Assistant Sales Manager

NORFOLK, VA.—James C. Evans has been appointed assistant sales manager to direct sales training and development in the states of Michigan, Ohio and Indiana for the Smith-Douglass Co., Inc., P. T. Smith, fertilizer sales manager, announced in Norfolk recently.

James C. Evans

Mr. Evans joined Smith-Douglass in 1948 after graduation from the University of Illinois with a degree in vocational agriculture. He is a native of Coatsburg, Ill. He served as sales manager of the company's Streator, Ill., territory for several years before being transferred to head a new sales territory in Ohio, where he has headquartered since August, 1956.

Mr. Evans lives in Van Wert, Ohio. The area where he will supervise sales training consists of those states served by the former Smith Agricultural Chemical Co., which merged with Smith-Douglass in September, 1959.

Idaho-Washington Pea Aphid Control to Continue

LEWISTON, IDAHO — Directors of the Idaho-Washington Pea Aphid Control League have voted to continue the three-year-old organization and its efforts to curtail the infestation of the pea aphid.

Dr. Harry Fenwick, extension pathologist at the University of Idaho, Moscow, states the league not only needs to continue its program but has no choice but to carry on.

The directors have voted to assess league members 10¢ per acre to finance research and spraying activities. Roger Allison, secretary, states the league last spring received contributions from 331 pea growers in Nez Perce, Lewis, Latah and Clearwater counties in Idaho and Whitman and Asotin counties in Washington.

Mr. Allison states the directors have decided to continue a survey of the pea aphid population next spring. Last spring a survey was made for the league by Arlen Brice, Orofino. Mr. Brice investigated the number of the insects in alfalfa fields and spraying was done on the most infested fields. The aphid carries a virus to green pea fields which kills the plant.

Midwest Shade Tree Conference Scheduled

OMAHA—The 15th annual meeting of the Midwestern Chapter of the National Shade Tree Conference will be held Feb. 10-12 in the Sheraton-Fontenelle Hotel, Omaha.

The educational program will feature discussions of diseases and insects that currently are affecting shade trees in the Midwest. Equipment and supplies used in the care of trees and shrubs will be on display throughout the meeting.

The program will include: "Safety in Handling Pesticides," Dr. Len Quattrochi, Chemagro Corp., Kansas City; "Dutch Elm Disease Up-to-Date," Dr. E. H. Wollerman, U.S. Forest Service, Columbus, Ohio; "Significance of Pathology in Shade Tree Care," Dr. Richard J. Campana, University of Maine, Orono, Maine; "Diagnosing Tree Troubles," Dr. Ray A. Keen, Kansas State University, Manhattan, Kansas; "Leaf Diseases of Shade Trees," Dr. John L. Weihing, University of Nebraska, Lincoln, Neb.; "Shade Tree Insects of the Midwest," Dr. Hugh E. Thompson, Kansas State University, Manhattan, Kansas.

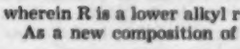
PATENTS and TRADEMARKS

2,916,369

Diallythiolcarbamates and Their Use as Herbicides. Patent issued Dec. 8, 1959, to Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Cal., assignors to Stauffer Chemical Co. The method of combatting weeds comprising applying a phytotoxic amount of a compound to the soil, said compound having the formula

wherein R is a lower alkyl radical.

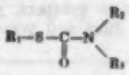
As a new composition of matter



wherein R is a lower alkyl radical.

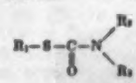
2,916,370

Chlorinated Thiolcarbamates and Their Use as Herbicides. Patent issued Dec. 8, 1959, to Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Cal., assignors to Stauffer Chemical Co. A new compound of the formula



wherein R_1 is a lower alkyl radical, R_2 is selected from the group consisting of chloroalkyl radicals and chloroallyl radicals and R_3 is selected from the group consisting of chloroalkyl radicals, alkyl radicals, allyl radicals and hydrogen.

The method of combating weeds comprising applying to the soil a phytotoxic amount of compound having the formula



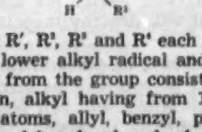
wherein R_1 is a lower alkyl radical, R_2 is selected from the group consisting of chloroalkyl radicals and chloroallyl radicals and R_3 is selected from the group consisting of chloroalkyl radicals, alkyl radicals, allyl radicals and hydrogen.

2,916,414

Urea-Hexachlorocyclohexane Insecticide. Patent issued Dec. 8, 1959, to Bernhard Raecke and Josef Drevers, Dusseldorf, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany. An insecticide comprising an aqueous medium containing a surface active agent and a dispersion of an adduct of urea and hexachlorocyclohexane.

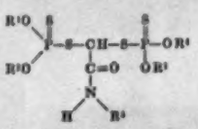
2,916,415

Pesticidal Phosphorus Esters. Patent issued Dec. 8, 1959, to Joe R. Willard and John F. Henahan, Middleport, N.Y., assignors to Food Machinery & Chemical Corp., New York. A compound of the formula:



wherein R', R², R³ and R⁴ each represents a lower alkyl radical and R³ is selected from the group consisting of hydrogen, alkyl having from 1 to 8 carbon atoms, allyl, benzyl, phenylethyl, cyclohexyl, phenyl, 4-chlorophenyl, 4-nitrophenyl, 4-methoxyphenyl, and carboxymethyl.

A method of destroying pests, comprising contacting said pests with a toxic concentration of a compound having the general formula:



wherein R', R², R³ and R⁴ each represent a lower alkyl radical and R³ is selected from the group consisting of hydrogen, alkyl having from 1 to 8 carbon atoms, allyl, benzyl, phenylethyl, cyclohexyl, phenyl, 4-chlorophenyl, 4-nitrophenyl, 4-methoxyphenyl, and carboxymethyl.

2,917,429

Method of Destroying Nematodes Employing Dimethyl Polysulfides. Patent issued Dec. 15, 1959, to Carleton B. Scott, Pomona, Irving D. Webb, Rosemead, and John W. Yale, Jr., Yorba Linda, Cal., assignors by mesne assignments to Collier Carbon & Chemical Corp. The method of controlling the growth of nematodes in the soil which comprises admixing with said soil a nematocidal amount of a dimethyl polysulfide of the formula:

$$CH_3—S(x)—CH_3$$

wherein "x" represents an integer greater than 2 and less than 10.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 29.1 to 29.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Living Earth, in capital letters, for packaged compost-enriched soil. Filed June 1, 1959, by Wilderness Valley Farms, Inc., Duluth, Minn. First use May 22, 1959.

Design, solid rectangle with oval in center and words Kay-Bee inscribed, for lawn preparation containing a weed killer. Filed Feb. 14, 1958, by Kahn Bros. Co., Chicago. First use Jan. 10, 1958.

Pent-O-Bunt, in capital letters, for fungicidal seed-treating compositions. Filed March 30, 1959, by Morton Chemical Co., Chicago. First use on or about Feb. 24, 1959.

Ana-Greene, in capital letters, for nitrogen solutions used as fertilizers. Filed Oct. 13, 1958, by Spencer Chemical Co., Kansas City, Mo. First use Sept. 26, 1958.

Orga-Min, hand drawn letters, for soil conditioner. Filed Feb. 25, 1959, by Chemical Specialties Co., Laredo, Texas. First use on or about Sept. 20, 1951.

Regione, in capital letters, for seed dressings and preparations of hormones for stimulating the growth of agricultural and horticultural products. Filed Nov. 19, 1957, by Plant Protection, Ltd., Yalding, Kent, England.

Dyna-Green, in capital letters, for plant-coloring ingredient in Fertilizers. Filed Feb. 20, 1959, by Leeds Chemical Products, Inc., Chicago. First use Feb. 7, 1958.

OKLAHOMA TONNAGE

STILLWATER, OKLA.—A total of 4,606 tons of fertilizer was sold in the State of Oklahoma in November, 1959, it was reported. Largest selling grade was 10-20-10, which hit 1,612 tons. Of fertilizer materials, normal superphosphate was largest, with 453 tons.

Canadian and U.S. Weed Control Groups in Winnipeg Discuss Chemical Herbicides

WINNIPEG, MAN., CANADA — Problems of herbicidal drift, control of wild oats, studies of weed species and their control, and control of unwanted vegetation in various agricultural crops were covered by speakers at the joint meeting of the North Central Weed Control Conference and the Western Canadian Weed Control Conference here Dec. 8-10. Some 500 persons registered for the meeting, headquarters of which were at the Royal Alexandra Hotel.

Of unusual interest to the delegates were discussions on control of wild oats, No. 1 weed in grain crops particularly in the Dakotas and Canada. The conference recommended use of two new wild oat killers, "Avadex," made by Monsanto Chemical Co., St. Louis, Mo., and "Carbyne," made by Spencer Chemical Co., Kansas City, Mo. (Croplife Dec. 14, page 21).

Both compounds have yet to be registered by the Canadian department of agriculture, however. H. W. Leggett, superintendent of the experimental farm at Regina, Sask., said that while the chemicals have been recommended for the control of wild oats, cultural control measures will continue to be used.

Problems in the "selling" of weed control were outlined by E. P. Sylwester, Iowa State University, Ames, Iowa. He said the function of the agricultural extension service is to carry out research findings to the people of the state. However, often a number of things interfere, such as unfavorable weather, poor meeting places, and schedules that may conflict with other local events.

In spite of the competition of other duties, work, radio, TV, newspapers, clubs and personal commitments, attendance at such meetings has held up well. "This is a tribute to the farmer who in this day of many choices for his time is still interested in the fundamental aspects of efficient agriculture," he said.

Extension work has many facets of expression, namely county meetings, planning meetings, demonstrations, press, radio, television, etc., to mention only a few. The farmers who take advantage of one, or many of these, are the best informed farmers that we have ever had . . . which presents quite a challenge to the extension worker.

E. K. Alban, Ohio State University, Columbus, discussed herbicidal drift in horticultural crops, stating that there are many available herbicides that can be used safely in or around horticultural crop plantings with no real hazard. However, through misuse of 2,4-D and 2,4,5-T, considerable damage may be caused to horticultural crops when such herbicides are improperly used adjacent to or in the general vicinity of these crops.

"Growers of horticultural crops are concerned with the monetary loss they are experiencing through misuse of 2,4-D and 2,4,5-T," he reported. "Grape growers have suffered reduced yields, poorer quality of the harvested fruit, and occasionally loss of plants in the vineyard. In addition to the damage experienced in the season of initial spray drift, grapes often reveal continuous ill effects for several years after the original symptoms were noted," he added. Damages are often difficult to evaluate since time, environmental conditions, and other factors determine plant recovery.

"Horticultural crop susceptibility to 2,4-D and 2,4,5-T is not a new problem," he said. "A re-statement of the problem would include (1) No horticultural crops are completely tolerant of these two chemicals, (2) Most horticultural crops can be severely damaged and many killed through misuse of these two herbicides, (3) The actual extent of damage to a plant or a planting is usually very difficult to evaluate, and (4) The question of "Whose 2,4-D or 2,4,5-T caused the damage?" is often the most difficult one to answer.

WEED CONFERENCE OFFICERS

WINNIPEG, MAN.—The North Central Weed Control Conference, meeting here jointly with the Western Canadian Weed Control Conference Dec. 8-10, elected Dr. LeRoy Holm, University of Wisconsin, president. Dr. Holm succeeds J. R. Foster, superintendent of the Dominion Experimental Farm, Indian Head, Sask.

The North Central Conference includes fourteen states in the North Central portion of the U.S. and the three Prairie Provinces of Canada.

Khapra Under Control

EL PASO, TEXAS — The khapra beetle infestation which hit this area last summer now seems to be well in hand, according to county agricultural extension workers.

No new infestations have appeared, and most of the reported ones have now been cleared. However, area grain men have been alerted, because of four remaining infestations near Phoenix.

GATES APPOINTMENT

DENVER—Charles R. Spencer has been named field sales manager of the Denver-based Gates Rubber Co. The announcement of the promotion was made by Clarence H. Mingle, executive vice president in charge of merchandising.

SCENES at the ninth annual Arkansas Plant Food Conference in Little Rock, Dec. 10-11, included those shown above. In the left photo, members of the Arkansas Plant Food Society, which supplies financial assistance in promoting soils and fertilizer work, include (left to right) Z. H. Calhoun, Southern Cotton Oil Co., president; L. A. Dhonau, Arkansas Plant Food Co., secretary-treasurer, and Woody Miley, extension soils specialist. In the center photo, Richard Maples, assistant agronomist, points to a visual aid as he tells conference participants about cotton response to fertilizer. In the photo at right, Dr. D. A. Brown, associate agronomist, discusses the use of lime in Arkansas.

Arkansas Farmers Still 'Way Below' Fertilizer Recommendations, Expert Says

LITTLE ROCK, ARK.—Although warned that too high nitrogen rates in cotton can cause rank growth, delayed maturity and reduced yields, agricultural workers and fertilizer industry personnel were told that fertilizer use in Arkansas is still way below the amounts recommended by the agricultural extension service for the most economical yields.

This warning, one of the important sidelights to the ninth annual Arkansas Plant Food Conference here (for story, see Croplife, Dec. 28, page 18) was given by Richard Maples, assistant agronomist with the agricultural experiment station at Marianna.

Mr. Maples said that through their research work they found that a 60 lb. rate of nitrogen on sandy soils increased the yield of seed cotton about 10 lb. per pound of nitrogen. This 60 lb. rate gave superior results over no nitrogen and a 30 lb. rate on both sandy loam and silt loam soils. A rate higher than 60 lb. per acre tended to cause the rank growth, delayed maturity and lower yields. Where phosphate was short in the soil, application of 30 to 60 lb. per acre gave a marked increase in earliness and slight yield increases. Potash was also necessary for top yields in many cases.

In most cases, Mr. Maples said, 80 lb. of nitrogen was sufficient for top yields on heavy clay soils. Unlike the sandy soils, higher rates did not tend to decrease yields.

Another interesting sidelight was brought out by Dr. J. P. Wells, assistant agronomist. Dr. Wells stated that in previous research, rice seemed to prefer the ammonium form of nitrogen. However, in the 1959 research the nitrate form applied in later growth stages was as efficiently used as ammonium forms. The average yield from all sources at the 60 lb. rate was 127 bu. At the 100 lb. rate the yield was raised to 138 bu. The use of 140 lb. of nitrogen per acre produced 148 bu. There was no significant yield difference from different solid sources of nitrogen and times of application. The use of 32% nitrogen solution, however, gave greater yields than the solid sources used.

"There has been a gradual increase in the application of lime with about 300,000 tons applied in 1958," Dr. D. A. Brown, associate agronomist, said. "However, only about one tenth of the amount of lime is being used that is immediately needed."

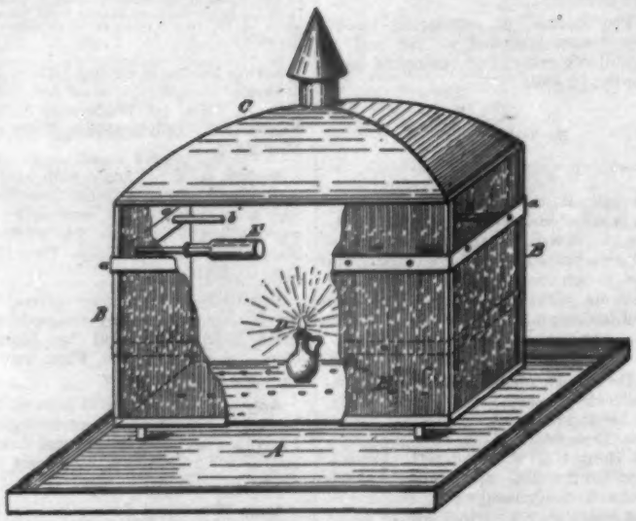
The agronomist listed several reasons why more lime isn't being applied. First is lack of education in the role of lime in soil fertility and soil conservation. Farmers fail to see all the benefits from lime since many effects are indirect and are not spectacular as with nitrogen or potash. Often, improper use or placement results in poor crop response. Another reason cited was lack of distribution facilities in the state.

The last, and perhaps most important, is that farmers depend too much on government payments. About 75 to 95% of the lime sold in Arkansas is sold in connection with government cost-sharing.

Crop response to lime on Arkansas soils was discussed by Dr. Charles Foy, assistant agronomist, Fayetteville. He reported a yield increase of 9 bu. soybeans per acre from two tons of lime on an acid silt loam in eastern Arkansas. Lime also increased yields of ladino clover and alfalfa on other acid soils. Bermuda grass did not respond to lime in 1959 even on soils of pH values near 5.0.

Robert Henderson, Jr., a dealer from Magnolia, reported on some of the problems of lime dealers. He first chided his own people by saying that the biggest problem is selling. He said some salesmen simply don't know how to separate a prospect from a suspect. He noted that after gaining a definite prospect, you need to be able to first sell yourself and

Saga of Insect Pest Control



INSECTS living back in the early 1870's had to be wary creatures to remain alive, even in the absence of modern chemical control materials. Inventors then, as now, were plotting ways and means to trap, ensnare and otherwise do away with agricultural pests.

One Edward D. Pugh, Fort Plain, Iowa, devised an insect trap which he said would protect bees and fruit trees "from the ravages of the moth and other insects." The trap consisted of a glass and sheet-metal case with a removable cover and side apertures, tubes, bottles, and a lamp. A pan and bait completed the props.

"To operate my trap," the inventor wrote in his patent, "put honey and wax or other suitable bait into the bottles and then place the bottles on the tubes (b) on the inside of the case. Set the case in the center of the pan (aa) and partly fill the pan with soapsuds or some other liquid that will destroy insects that fall into it."

Mr. Pugh suggested that the trap should be placed near beehives or orchards so the moth and other insects will be attracted by the light and fly against the glass. "Many will fall into the liquid in the pan and will perish," the inventor observed. "Those that alight safely on the sides of the case will be attracted by the bait in the bottles and will pass through the apertures and tubes and into the bottles where they will be destroyed."

then make the prospect realize he needs lime.

The lime industry needs to spend money for advertising, spend some money on lime demonstrations, and then sell some outstanding farmers on the use of lime—then you can sell the others in the community, Mr. Henderson said.

Dr. A. E. Spooner, assistant agronomist, Fayetteville, reported on grazing fertility experiments, and Donald Adams, extension soils specialist, reported on field demonstrations.

"In order to stay in the livestock business and make a decent living, better pasture management practices are essential, and proper fertilization is one of these practices," Dr. Spooner said.

In reporting on research work at the Livestock and Forestry Branch Station at Batesville, Dr. Spooner said that work since 1950 has been with adapted improved species that were seeded or sodded in the pasture after native species did not do well under intensive grazing conditions. Species established were common bermuda, lespedeza, white clover and hop clover.

In giving beef gains per acre over a period of years, Dr. Spooner pointed out that soil variability between pastures is greatly due to the rolling land on which they are located. He said this could account for some of the unexpected responses from fertilizer treatments.

A summary of these treatments is given in this table:

Summary of Beef Gains Per Acre 1953-1958

Fertilizer Treatment	Beef Gains Per acre Average	Number of Years
0-0-0	79	6
0-40-0	187	6
132-60-60	219	6
63-60-30	246	6
33-120-0	251	6
30-60-30	264	5

Clay Moore, extension farm management specialist, reviewed trends in pasture establishment and maintenance during the past five years. He said farmers had established permanent cover on about 44,000 acres from 1954 through 1958.

In explaining why there is not a more rapid trend in pasture establishment, Mr. Moore said, "The conversion from a row crop agriculture in the Arkansas uplands to cattle operations requires a different kind of management and considerable capital. As cotton left the uplands, people migrated away from the farm as they considered cattle as a livelihood and compared their opportunities in off-the-farm employment."

At their annual board meeting the Arkansas Plant Food Educational Society reviewed accomplishments for the past year. They co-sponsored 115 fertilizer demonstrations with the agricultural extension service. Company members of the society supplied mixed fertilizer at cost price and nitrogen free in most cases. They sponsored a $50 award to the outstanding student in the university agronomy department. They supplied wire cages for pasture demonstrations and co-sponsored tours and field days. The society also provided funds for co-sponsorship of the 1959 Plant Food Conference with the University of Arkansas.

Money was appropriated for purchasing additional wire cages for demonstrations, and plaques and certificates for a community pasture improvement activity sponsored with the extension service.

The board of directors voted to retain the same officers of Z. H. Calhoun, Southern Cotton Oil Co., president; R. L. Morgan, Ark-Mo Plant Food Co., vice president, and L. A. Dhonau, Arkansas Plant Food Co., secretary-treasurer.

CHEMICAL APPOINTMENT

KEARNY, N.J.—Harry Theobald, president, has announced the appointment of J. A. Quinn as vice president of the Wymat Chemical Corp., Kearny, N.J.

Research in the News

Dry weather—no matter how well you can predict its coming—is no reason to use less fertilizer.

The fact is that healthy plants take drouth better than starved ones. And fertilizer helps keep the plants healthy, according to Curtis Overdahl, extension soils specialist at the University of Minnesota.

No matter what the moisture outlook, Mr. Overdahl calls reducing fertilizer use a poor place to economize.

Minnesota rainfall is usually dependable enough to give a fair crop most years. But farmers might miss some real profits if they hold up on fertilizer, expecting a dry year, and got a good one instead. Low corn stands and low fertility lose more money than will recommended populations and fertilizer rates on a crop that fails.

Research shows that rather heavy fertilizing can speed up corn pollination. This can be an advantage. Average date on which three-fourths of the corn was "in the silk" was Aug. 13 with low fertility, Aug. 5 for medium and Aug. 1 for high fertility.

Average soil moisture slacks off in July and continues to drop through August. So in the long run it may pay to have corn pollinate sooner—when moisture is higher.

Some years, July may be hot and dry, with good rains in early August. In such a case, Mr. Overdahl admits that rains might be too late to help corn hastened by fertilizer. Such situations, though, are the exception rather than the rule.

In forages, which could include corn for silage, fertilizer benefits are probably more consistent from year to year than on grain crops. Mr. Overdahl says that in several sandy areas last summer, short dry periods ruined the corn. At the same time, alfalfa—even though retarded—did get some benefit from the fertilizer.

●

People can learn a good deal about corn production by observing certain conditions at harvest time.

For instance, says Russell Stivers, Purdue University extension agronomist, skips in stalk population reduce the number of ears and consequently the yield.

When ears weigh an average of about ½ lb. each at harvest, maximum yields are generally the result. Large ears mean there were too few plants and that the yield would have been higher with thicker stands. On the other hand, more than 100 ears and nubbins per 100 plants generally indicates under planting.

Small ears with unfilled tips may be caused by a nitrogen deficiency at a critical time.

Small ears poorly filled on one side indicate lack of phosphorus. Phosphorus deficiency interferes with pollination and kernel development. Barren stalks also result from a shortage of phosphorus.

Ears poorly filled at tips and loose, chaffy kernels may indicate a potash shortage.

Poorly filled ears may result from dry weather which slows silking and thus interferes with pollination of the kernels.

Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

For Prosperous New Year . . .

Profits in 1960 Must Be Great Enough to Provide Services, Maintain Modern Plant

THE PLEASANT phrase "Happy New Year" with which everyone has been greeted of late indeed expresses a friendly wish. Now that 1960 is actually here, we suddenly realize that no longer is the "new year" a thing of the future, but is a reality . . . NOW.

Pencils are being sharpened by many people in the trade to see what kind of tonnage might be expected to move during the 1960 season. In view of the farm income decline, the tonnage may slip a little. This is bad. It is particularly bad in view of the microscopic margin of profit realized from sales of fertilizer and pesticides.

While the farmer's "cost-price squeeze" has been widely publicized, the same situation in the fertilizer trade has been somewhat overlooked. Labor costs are up, insurance is on the increase and plant investment greater than ever for the manufacturer. Still the price the farmer pays for fertilizer remains at a relatively low figure.

Speakers at the recent California Fertilizer Assn. meeting brought out some interesting facts concerning the cost of maintaining a fertilizer business and, in particular, the necessity of realizing a profit margin wide enough to take care of additional research and services to the customer.

The reward for risking capital in a business should include a margin of profit sufficient to pay out the necessary investment in plant and equipment, to provide funds for replacement of worn-out machinery and for some business expansion. There should still remain enough net profit so that the prudent operator may support development or research activities either by his organization or by others. These are necessary to continued technical progress in the industry.

As an example of the problem of making enough profit to replace machinery and other equipment, the following quotation was presented from the annual report of a manufacturing firm. The principle involved is the same whether the company happens to be an iron-working concern or a plant turning out chemical products for agriculture:

"In 1942 they bought a lathe which cost $12,000. Federal tax laws allowed them to depreciate it over a fourteen-year period and the lathe, a good one, lasted that long. In 1956, it had to be replaced. From the annual depreciation allowance, the company had accumulated $12,000 tax free. The old lathe was worth $1,000 on the second-hand market.

"Everything would seem very fine except that by 1956 an essentially similar lathe cost $35,000 instead of $12,000 and, in the meantime, technical progress in the industry had developed new attachments to meet the advanced needs for more complicated machinery. To get a lathe with the necessary attachments cost not $35,000, but $67,000.

"With only $13,000 available from depreciation and salvage, the company needed to have earned and retained an additional $54,000 just to permit it to stay in business. To retain $54,000 would require them to make a profit of $112,000 before federal income taxes. To make this much profit the company, which had an average pretax earning of 9% of its sales dollar, had to sell one and a quarter million dollars' worth of products to its customers. One and a quarter million dollars in sales was required to replace one machine, so that one shift of three employees could continue working and the company could continue in its line of business."

The CFA convention was told that the fertilizer industry is not achieving at the present time, the business stability needed to yield profits necessary to pay the cost of staying in business. But why is that? Do customers jump to low price offerings because the products and services are not worth the price? Maybe the product is priced too low to yield adequate profit to make possible the necessary services.

There is no doubt in the world about the value of the fertilizers and pesticides used by the farmers. They know they "couldn't get along without them." All sorts of statistics are available showing that for every dollar a grower spends on needed fertilizer, he reaps profits of from $3 to $10 in extra yields. These cost-profit ratios, basic reasons for the use of fertilizer in the first place, would not be changed significantly by either a reduction or an increase of 10%. But an added percentage point or two could make a tremendous difference in the amount and kind of services the fertilizer industry might render to the farmer to make his investment even more worthwhile.

Not only does the farmer want services, he NEEDS them. Thus, the problem of the industry is how to provide goods and services, and get a fair price for them. As one CFA speaker put it, "Have we not yet learned that we cannot make a profit by still applying fertilizer below cost, absorbing the loss in the price of the material applied, which in itself is already so low that it is actually not carrying its own weight?"

What would happen during 1960, if companies providing various services were to reappraise their activities, eliminating those which are merely gestures, and put a realistic price on the remaining services? Probably the earth would shake.

Such a "realistic" price would include not only the cost of the labor involved, but the proper share of all costs such as amortization of equipment, accounting costs, insurance costs, proper management fees and the cost of money tied up in capital investment. If such an honest appraisal were made, would the industry continue to give away the dollars represented by these services?

What would happen . . . would the services be eliminated, or would the price of product be boosted to a level which would permit the services to stand on their own feet? It is an interesting conjecture.

Perhaps 1960 will be the year when a few hardy businessmen may take further steps to correct some of the inequities which seem to have entered the agricultural chemical field.

It would appear that a vast majority of farmers to whom the fertilizer and pesticides are sold, are good solid citizens with a fair appreciation of the goods and services offered by the trade. Furthermore, they do not appear to be opposed to paying a fair market price for these goods and services. Therefore, there should be no reason why the industry could not be made more profitable. The times are relatively prosperous, even with the slight dip in farm income predicted for the coming season.

Judging the success of a season solely on the basis of tonnage seems like a rather distorted measuring stick. In the final analysis, it is the amount of money left over, if any, in the form of net profit that really counts.

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Feb. 10-12—Midwestern Chapter, National Shade Tree Conference, Annual Meeting, Sheraton-Fontenelle Hotel, Omaha, Noel B. Wysong, 536 N. Harlem Ave., River Forest, Ill., Secretary-Treasurer.

Feb. 4—New Pesticide Review for Northern California, Recreation Hall, University of California, Davis, Sponsored by the Western Agricultural Chemicals Assn. and the Entomology Club of Northern California.

Jan. 14—Annual Western Oregon Fertilizer Conference, Withycombe Hall, Corvallis, Oregon.

Feb. 1-5—Utah Fertilizer Dealers' Schools: Feb. 1, Richfield; Feb. 2, Provo; Feb. 3, Roosevelt; Feb. 4, Ogden; Feb. 5, Tremont.

Feb. 9-10—Utah Fertilizer Industry Conference: Feb. 9, Provo; Feb. 10, Ogden.

Jan. 14-March 1—Ohio Regional Fertilizer and Lime Conferences: Jan. 14, Masonic Building, Ravenna; Jan. 18, Methodist Church, Caldwell; Jan. 19, 4-H Building, fairgrounds, Cadiz; Jan. 20, YWCA Building, Zanesville; Jan. 21, Methodist Church, Jackson; Jan. 26, Elks Building, Findlay; Jan. 27, Grange Building, New London; March 1, American Legion Building, Lebanon.

Meeting Memos listed above are being listed in this department this week for the first time.

Jan. 5-6—Annual Texas Fertilizer Conference, College Station, Texas.

Jan. 5-6—12th Annual Fertilizer Industry Representatives' Conference, Memorial Union, Iowa State University, Ames, Iowa.

Jan. 6—Southwest Research and Education Committee meeting, Texas A&M College, College Station, Texas.

Jan. 6-7 — Wisconsin Pesticide Conference with Industry, Wisconsin Center Bldg., University of Wisconsin, Madison, Wis.

Jan. 6-8—14th Annual Meeting, Northeastern Weed Control Conference, Hotel New Yorker, New York City.

Jan. 7-8—Fourth Georgia Structural Pest Control Operators' Short Course, University of Georgia, Athens.

Jan. 7-8—Colorado Fertilizer Conference, Fort Collins, Colo.

Jan. 7-8—Sixth Annual Mississippi Insect Control Conference, in conjunction with annual meeting of Mississippi Entomological Assn., Mississippi State University, State College, Miss.

Jan. 7-8—Mississippi Insect Control Conference, Sixth Annual Meeting, State College, Miss.

Jan. 11-14—Kansas Fertilizer Dealer Meetings: Jan. 11, Hiawatha; Jan. 12, Lawrence; Jan. 13, Abilene, and Jan. 14, Belleville.

Jan. 12-13—Thirteenth Annual Meeting of the Ohio Pesticide Institute, Lincoln Lodge, Columbus, Ohio.

Jan. 12-13 — Nebraska Fertilizer Institute annual convention, Pershing Auditorium, Lincoln, Neb.

Jan. 13—Georgia Plant Food Educational Society, University of Georgia, Athens, Ga.

Jan. 13 — New Mexico Agricultural Chemical Conference, third annual meeting, Milton Hall, New Mexico State University, University Park, N.M., Dr. J. Gordon Watts, chairman.

Jan. 13-14—Pesticide School, North Carolina State College, Raleigh, N.C.

Jan. 13-15—Ninth Annual Convention, Agricultural Ammonia Institute, Statler Hilton Hotel, Dallas, Texas.

Jan. 13-15—Virginia Polytechnic Institute Agronomy Schools: Jan. 13, Culpeper; Jan. 14, Tappahannock; Jan. 15, Gloucester.

Jan. 14-15—Beltwide Cotton Production-Mechanization Conference, Peabody Hotel, Memphis, Tenn.

Jan. 14-15—Annual meeting of Georgia Plant Food Educational Society in conjunction with Georgia Section, American Society of Agronomy and Soil Science Society of America, University of Georgia, Athens.

Jan. 14-16—10th Annual Convention of the Agricultural Aircraft Assn., El Mirador Hotel, Palm Springs, Cal.

Jan. 19-21—Twelfth Annual California Weed Conference, Sacramento, Cal.

Jan. 20-21 — Third Annual Arizona Fertilizer Conference, University of Arizona campus, Tucson, Ariz.

Jan. 20-21—North West Agricultural Chemicals Industry Conference, Benson Hotel, Portland, Ore., C. O. Barnard, executive secretary.

Jan. 20-22—Thirteenth Annual Southern Weed Conference, Buena Vista Hotel, Biloxi, Miss.

Jan. 21—Northeast Region, National Plant Food Institute fertilizer sales promotion workshop, Hotel Hershey, Hershey, Pa.

Jan. 21—Fertilizer Sales Promotion Workshop, Hotel Hershey, Hershey, Pa.

Jan. 25—Wisconsin Lime and Fertilizer Day, University of Wisconsin campus, Madison, Wis.

Jan. 25-26—Second Annual Agricultural Pesticide Conference, Purdue University, Lafayette, Ind.

Jan. 25-27—Cotton States Branch, Entomological Society of America, DeSoto Hotel, Savannah, Ga.

Jan. 26-27—South Dakota Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Jan. 27-28 — Annual Illinois Custom Spray Operators' Training School, University of Illinois, Urbana, Ill.

Jan. 27-29—Symposium on Chemistry of Phosphate-Soil Reactions, Muscle Shoals, Ala.

Jan. 28-29—Annual meeting of the Colorado Agricultural Chemicals Assn., Cosmopolitan Hotel, Denver, Colo.

Feb. 2-4—Pest Control Operators' School, North Carolina State College, Raleigh, N.C.

Feb. 3-4—Illinois annual fertilizer industry conference, University of Illinois, Urbana.

Feb. 4—Executive Committee Meeting, National Safety Council, Fertilizer Safety Section, New Florida Hotel, Lakeland, Fla.

Feb. 8-9—Southwestern Branch, Entomological Society of America, Hilton Hotel, El Paso, Texas.

Feb. 8-9—Twenty-Second Annual Meeting, National Cotton Council of America, Statler-Hilton Hotel, Dallas, Texas.

Feb. 9-11—Seventh Annual Agricultural Chemicals Conference, Texas Technological College, Lubbock, Texas.

Feb. 9-11—Southern Regional Liquid Fertilizer Conference, Rock Eagle 4-H Club Center, Eatonton, Ga.

Feb. 11-12 — Midwest Agronomists-Fertilizer Industry meeting, Edgewater Beach Hotel, Chicago, Ill.

Feb. 17-18, 23-25—Indiana Ammonia Service School; Feb. 17, Lafayette; Feb. 18, Bedford; Feb. 23, Valparaiso; Feb. 24, Ft. Wayne; Feb. 25, Muncie.

Feb. 17-18—Pest Control Conference, Alabama Polytechnic Institute campus, Auburn, Ala. Sponsored by A.P.I. and the Alabama Association for Control of Economic Pests.

Feb. 22-25—Weed Society of America meeting, in conjunction with Western Weed Conference, Cosmopolitan Hotel, Denver, Colo.

March 22-23—Western Agricultural Chemicals Assn., spring meeting, Miramar Hotel, Santa Barbara, Cal.

March 23-25—North Central Branch, Entomological Society of America, Schroeder Hotel, Milwaukee, Wis.

March 30-31—Twenty-fourth annual meeting, Georgia Entomological Society, New Science Center, University of Georgia, Athens, Ga.

June 12-15—National Plant Food Institute annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 27-29—Pacific Branch, Entomological Society of America, Davenport Hotel, Spokane, Wash.

July 13-15—Eleventh Annual Fertilizer Conference of the Pacific Northwest, Hotel Utah, Salt Lake City; B. R. Bertramson, State College of Washington, Pullman, Wash., chairman.

July 27-29—Great Plains Agricultural Council, 1960 meeting, Laramie, Wyo.

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- Keeping all segments informed of all industry news.
- Providing feature material designed to help manufacturers and mixers to do a better job, to help dealers sell and to help farm advisors and educational people make sound recommendations.
- Keeping all industry alert to current and proposed government action.
- Providing a channel through which news and advertising can reach all segments of the industry.

This new approach to business journalism for the agricultural chemical industry is being made by a company with 87 years of experience in newsgathering and publishing and one which has built an unchallenged reputation for reliability and service. Advertising of your products and services in Croplife will mean *richer sales fields* for you!

National Coverage . . .

Croplife's carefully controlled circulation provides national coverage of manufacturers, formulators, mixers and ingredient suppliers.

Plus Regional Concentration . . .

In addition a unique regional circulation plan provides advertisers with a selective marketing-area coverage of wholesale and retail dealers and farm advisory personnel.

WRITE—WIRE—PHONE our nearest office for complete analysis of Croplife's important role in your advertising program.

NBP *Member of National Business Publications*

BPA *Member of Business Publications Audit*

Croplife ...for richer sales fields

The Miller Publishing Company *Business Journalists Since 1873*

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